Mission Arthritis India (MAI)

Editorial
Dr. Kalindi Phadke

Mission Arthritis India (MAI)

Shri. P.C. Nahar

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Dr. Arvind Chopra

Dr. Ekta Chanchani

Dr. Vinaya Kunjir

Dr. Vaijayanti Lagu - Joshi

Anuradha Vanugopalan

Dr. Vardhan S. Joshi

Anuradha Vanugopalan

Manjit Saluja

Dr. Kalindi Phadke

Dr. Vinaya Kunjir

Dr. Kalindi Phadke

Suniti Shrotriya

Dr. Jayashri Patil

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दीपावलीवर हार्दिक शुभेच्छा!

Wish You A Happy Diwali
मि

मृत का लिंदी फडके, संपादक

शन आधारित इंडिया ‘माई’ च्या सर्वेक्षण व तत्सम्बन्धी वातावरणातील स्थळातील नियतकार्यकर्त्याचा हा खास विशेषांक आपल्या सादर क्रमांकन आम्हास अतिशय आवश्यक होत होईल आहे.

‘माई’ ही संस्था संदर्भित व तत्सम्बन्धी रूपांतरणी स्थापना करून तिथी नोंद Public Trust म्हणून केलेली आहे. संस्थेदरम्यान अधिक माहिती पुढील लेखात दिली आहे. ‘माई’ वा मुख्य उद्देश म्हणजेच संदर्भित व अस्थायी स्थळातील लॅंडस्काप, लॅंडस्काप उद्योगसंदर्भातील माहिती देणे व स्थळातील मनात निरस्ता ने देता सकारात्मक कृतीकों ठेवून आंदोलनात आयूष्य करून जगात येईल या बदल मार्गदर्शन करू असेल त्याचा लाभ उच्च. त्या कार्याशी आम्ही नवनवे उपक्रम आहेत.

संदर्भित हा रोग जगात फालो रूकी आपल्या आध्यात्मिकता. त्याचे अनेक प्रकार व तत्त्वात आहेत, रांग उद्विकत योग प्रकार ज्ञात आढळतात. 1) ऑस्ट्रेलियाच्या जोर्डनपीटेस (OA) व 2) जुर्मट्डाइड आर्थीटिस (RA).

OA हा प्रकार ज्ञात मार्गदर्शक व्यवस्था लोकांसोबत दिसतो. व्यक्ती समाजाचे साधन उत्साहाच्या माणसऱ्यांसाठी ५० ते ६० टक्के लोकांना व संदर्भितात जगात असतो. अनेक वर्ग शारीरिक हार पेलाच्या सांविधानिक राजपर्यायात होऊन सांविधानिक दोन हांड्डर व्यवस्थेत लॅंडस्काप आंदोलन (वृक्ष) असे ते हक्कांतून हक्कांतून हाळे एकमेकांतर पायेच लागत व लागतेच वेदना सुरू होतात. क्या कंपनी समाजात कृत्याच्या कामाच्या मिळज्ञात नेक्षेत्रात एवढावास्था सांघ तत्सा व्यक्तिक गेल्याने हा जगात सुरू होतो. बेडनांकडच विकेक्याने दाख (inflammation) सुरू होतो. शरीरात नवीन कृत्यांत तायार करण्याचा प्रमाण मूळत तरी त्या पद्धत्यासाठी साधनपत्र्या मार्गदर्शक होत नाहीत. हूडू हूडू, सांघातिक आकर्षकी बदलतो. सर्वसाधारणपणे मोठे संघे, म्हणजे गुंडे व कर्मचारी संघां, यावर शारीरिक हार सतत पर्यायांना ते प्रथम दुखू लागतात. वेदनाशांकाल्यात व Antiinflammatory (दाख व सूज कमी करण्याशी) आषाढे काही मार्गदर्शक उपप्रोगी पाऊलत. पण सांघे फार हवार आल्यास असतात तर शाश्वतकर्णे मुस्तिक एतेर्या मार्गदर्शक करू येते. त्याच्या माणसऱ्यात आयूष्य पडतो. हे कृत्य सांघ १०-२५ वर्षापूर्व टिकतात.

RA हा रोग कीण्याया व्यक्ती सुरू होऊ शकतो. तो सुरू होण्याची कारणे अनुजन पौर्णष शारीरिक नाहीत. यावर अनुजनकर्त्यात भाग नियमित असेल. हा एक autoimmune disease समजत जातो. म्हणजेच आपल्या प्रतिकाराचा शक्तीत काही विभाग होऊन ती आपल्याच शारीरिक घटकांकी लवकर राहते. हा रोग वृक्ष्यापेक्षा साधारण जास्त आढळतो व त्याची बघेच संघ नसते. संघात रोज व्याहस्य हस्तिता किंवा एकूण दशकांत सुरू होतो. सूक्ष्मता साधारणपणे छोट्या सांघापासून होऊन हूडू हूडू अनेक सांघे विकृतीत. दाख (inflammation), तात्वी रोजेच, सूज व यें वेदना हे ते दुखपायाचे प्रमुख घटक आहेत. Immune system मध्ये ही अनेक विभाग होतात. रोगाची प्रसरण हाताच्या काही वाढपार्या सांघे वेदनाकडून होऊन शारीरिक हलनेदीही अवधारच वेदना बसते. रोगाच्या फाराचे फार वाढीमध्ये हाताच्या रोगाच्या फारात फाराचे फार वाढीमध्ये हाताच्या रोगाच्या फारात फाराचे फार
We are proud to present to you this Special Issue of Mission Arthritis India, "MAI", to coincide with our third birthday celebrations.

MAI has been founded as a public trust by and for the patients of arthritis and allied diseases. More information regarding MAI and its activities have been presented in the next article authored by the chairman of MAI. The main aim of MAI is to bring awareness to the patients regarding the diseases of joints and bones, available remedies, and guide them about the ways to develop a positive attitude towards their condition and life in general. From that point of view, several awareness programmes are arranged and sponsored by MAI.

Arthritis is a very common disorder all over the world. It is a slowly progressive, noncommunicable chronic disease. Although morbid, it is not considered to be a fatal disease. There are various types and forms of arthritis with two most common forms, viz. osteoarthritis (OA) and...
OA is very predominant among the elderly population, both men and women. 50 - 60% people after the age of 50 complain about pain and stiffness in one or more joints. It is a degenerative form of arthritis, mainly involving weight-bearing joints, e.g. knee and hip joints, and at times joints of the spine. It is the result of wear and tear of joints, trauma or occupation related overuse of joints and the end result is break down of cartilage, a rubber like translucent tissue covering the ends of the bones. With the progression of disease, the bones are denuded, rub against each other, causing pain, stiffness and inflammation. The cartilage cannot regenerate in its original form and the joint structure is disfigured. Analgesic and anti-inflammatory drugs give some relief; but in advanced stages, joint replacement surgery may be the only answer. Such replaced joints may last for 10-15 years.

RA is more debilitating and morbid as compared to OA. It is more common in women and shows its first signs in the 3rd and 4th decade of their lives. There is no age restriction, as juvenile form can be observed in very young children. There is a heredity factor involved. It is an autoimmune disorder, wherein the immune system reacts against certain proteins and other components of the body, leading to immune changes and inflammatory reactions, ultimate result being the loss of cartilage and joint destruction. Typically, the disease first appears in small joints and then many other joints are involved. Because of the insidious nature of the disease and associated physical disabilities, the patient has to deal with many socioeconomic and psychological problems. The patient has to be frequently in touch of his doctor, high costs of medicines have to be borne, deleterious side effects of medicines have to be faced. The patient is unable to perform simple tasks due to the pain and discomfort, which also hampers the social life. Friends and relatives often give advices. The patient is confused and in the hope of feeling better, changes many pathies and doctors. If an ayurvedic and homeopathy doctor is not able to properly understand patients "prakruti", wrong medicines may be given and a great deal of time and money are wasted while the disease is progressing. The patient then falls prey to disillutionment and loss of hope for the future. Additionally, in Indian family system less emphasis is given on the womens' health and care. Although she is expected to work for the family around the clock, very rarely the family members care for her health, diet, medicines and proper rest. With the help of these commodities and family support, the patient can develop a positive attitude. Although the disease cannot be completely cured, there are ways to overcome the difficulties and lead normal life.
मिशन आर्थ्रायटिस इंडिया (माई)

माई' हा शब्दात आईचा समावेश आहे. म्हणून माई हा शब्द वाचल्यानंतर आपल्याला आई कडून मिशनायण येणे हे साहजिक काळ आहे. अशी ही ‘माई’ व तिचे वास्तवरूपांच वार्षिक विकास हे संदर्भ (Arthritis) जडलेल्या रूपानाथ उपलब्ध करते. हा उत्साहाचा हा रोगाने पौर्ती रूग्णानी तिथल्यांही अशी संस्थास्थापन करून पडत. तीतरी व इतर निर्माणातील जागतिक तज्ज्ञांकडून सहकायचे आळण्याचे मिशन वाचल्यानंतर नोंदे 200 मध्ये ‘माई’ चा स्थान आला होता. हा संस्थेचा कार्यवाही स्वच्छ देखभालकरिता संस्थेची नौं ‘सार्वजनिक विकास संस्था’ (Public Trust) म्हणून करण्यात आली आहे.

संस्थेचे मुख्य उत्सर्जन समावेशात विशेष करून संदर्भावरुन रूप व त्यांचे संबंधातच रोगांच्या रोगांच्या त्यांच्या रोगांच्या व रोगांच्या तीर्थकरी कर्नात करणे कस्ती देवता रोल, जेणे करून रूग्णाचे जीवन अधिकाधिक सुरुवात होऊन शक्य, हा विषय जागरूकता निर्माण करणे हा आहे. हा मूळ उद्देशानुसार अनुसार त्यांच्यांच्या लोकांमध्ये रूग्णाने स्वास्थ्यपूर्ण पोषणदायक रूपानाथ ओषधांची सर्वसाधारण माहिती देणे, विविध ओषधीय दार्ज व पदार्थांचा उपयोग (उदा. Allopathy, आयुर्वेद, Accuprenure इ.व. इत्यादी) माहिती देणे, रूग्णांसंबंधित उपलब्ध असलेली लेणी माहिती रूग्णांपर्यंत पोषणदायक, संस्थेच्या आर्थिक परिस्थितीभर्ती वर्तंता या विषयाच्या संरचनानुसार प्रोत्साहन देणे, इत्यादी कार्यक्रम चालू आहेत. वरील सर्व उद्देशानुसार अनुसरण संस्थेने स्वास्थ्यपूर्ण रूपानाथ रूग्णाना त्यांमध्ये अशा विविध विषयांवर अमदी सोया व सुलभ भाषेत, इंग्रजी व मराठी दोन्ही भाषेत माहिती अंक प्रकाशित केलेले आहेत व हे अंक संस्थेच्या सर्व समस्याबाबत घरीच पाठविण्यात आलेले आहेत. आशा अंकांमध्ये चर्चितलेल्या विषयांमध्ये काही अशा प्रकारे -

1. संदर्भातांच्या रूग्णानी कटाक्षेच टायमवॉच व पार्श्ववॉच गोष्टीबाळ सुविधा.
2. हाडवर (Osteoporosis) संबंधित माहिती.
3. वृतांननुसार गुढ्यांची व्यावहारी काळजी.
4. संदर्भात रूग्णानी आहारविषयक व्यावहारी काळजी.
5. संदर्भात वेतनांची रोगाच्या ऑडोमेटरी व्यावहारी काळजी.
6. रूग्णांचे आजार.
7. विविध अवयवांचा वातावरण व उपयोगी व्यावहार.
8. संदर्भात रूग्णाना देवांच्या अडगणन व त्या सुसंस्करणाकरी संतुचतेचा उद्योग.
9. कृत्रिम संधारोपणविषयक (Joint Replacement) माहिती.
10. संदर्भात वागवलंबर परिस्थित, व्यावहारी उपयोगी व्यावहार, पायांच्या सर्वसाधारणपणे आकर्षणात्या विकृति.

आमच्याकडे संदर्भित विविध विषयविरूद्ध माहिती ‘माई’ या सर्व समस्याबाबत पोषणदायक कार्य माहील 3 क्षेत्र प्रकाशून आलेले आहेत.
Mission Arthritis India (MAI)

MAI (Mission Arthritis India) is a registered Society as Public Trust, formed by Arthritis Patients to create public awareness. MAI publishes literature, holds meetings and counsels patients. It is the only body of Arthritis Patients, which actively supports and participates in Bone & Joint decade activities to allow them to lead better life style.

Mr. P. C. Nahar
Chairman, MAI

‘माई’ - ऑक्टोबर २००३ विशेषांक

Mission Arthritis India (MAI)
THE ‘BONE AND JOINT DECADE’ (BJD)
AN OVERVIEW

Dr. Arvind Chopra, MD, National Secretary,
BJD-India: National Action Network
Center For Rheumatic Diseases, Pune.

Ifespan of man has increased significantly over the last century or so largely due to the control of infectious diseases by potent antibiotics. The ever enhancing diagnostic facilities continue to facilitate early diagnosis and proper therapy. Numerous other factors concerning living conditions, modernization and environment control have all made singular contributions to his longevity. But, health issues connected with the quality of life seem to have made lesser progress. And ‘bone and joint’ health relates to quality of life.

In Jan 2000, WHO (World Health Organization) organized a scientific expert group meeting in Geneva, Switzerland, to launch it’s Bone and Joint Decade (BJD), 2000-2010 program. Over 70 expert participants, belonging to different fields (Rheumatology, orthopedics, epidemiology, social sciences, statistics, economics, health planning, etc), from all over the World were invited to launch the BJD global movement. This meeting focused on 5 major disorders namely rheumatoid arthritis (RA), osteoarthritis (OA), osteoporosis, spinal disorders and severe limb trauma that pose maximum threat to quality of life. While RA and limb trauma can disable young people, OA and osteoporosis gradually cripple people in advancing years of life. However BJD will look at all other form of crippling diseases and deformities that affect bone and joints.

The current burden of rheumatic and musculoskeletal diseases in the World is enormous. Some of the published statistics are revealing:

1. Arthritis accounts for over 50% of all chronic conditions in persons aged 60 years and above. 10-20% of population visits doctor for all kinds of rheumatism.

2. The WHO COPCORD (Community program for control of rheumatic diseases) in village Bhigwan (Pune), ongoing since 1996, has shown that about 13-14% of this rural population suffered from some kind of rheumatic ache and pain, and many required medical care. If you extend this to the entire country, there would be more than 150 million patients - much more than TB, AIDS, heart diseases, cancer, etc.

3. Several hundred million people worldwide already suffer from bone and joint diseases, and this figure is set to increase sharply due to the predicted doubling in numbers of people over age 50 by the year 2020.

4. Osteoarthritis is the 4th most frequent predicted cause of health problems worldwide in women and the 8th in men.

5. Back pain is the second leading cause of sick leave from work.

6. Fragility fractures, due to osteoporosis, have doubled in the last decade. It is estimated that over 40% of all women over the age of 50 years (as women are more likely to suffer from osteoporosis after menopause) will suffer from osteoporotic fracture.

7. The frequency of global hip fractures from osteoporosis will double in Asia and Latin America in the
Every 30 seconds someone dies from an accident on the world’s roads. Every year 23-34 million people worldwide are injured in road traffic accidents.

By 2020, road traffic accidents (RTA) would compete with heart disorders and cancers to be amongst the 3 leading causes of human mortality and morbidity. Almost, 700,000 people are killed globally by RTA, which are estimated to be the tenth leading cause of death (World Health Report, 1999).

25% of the health expenditure in the developing countries is expected to be spent on trauma related care by the year 2010.

The key goal of the BJD is summed up in its slogan “keep people moving.” The BJD movement, through its national action network (NAN) in every country, hopes to raise awareness of the growing burden of rheumatic musculoskeletal diseases on the society, thereby promoting better treatment and prevention. Through health education, it will empower patients to make the right decision regarding their bone and joint health. The BJD will encourage research in these disorders.

It is generally believed that doctors, especially the young lot, all over the World lack the proper skills to combat bone and joint disorders in patients and community. Management of pain continues to be a major challenge for the medical community. A specific goal of BJD is to improve the undergraduate curriculum on bone and joint diseases in medical schools and colleges. The diagnostic and treatment skills of the general practitioners (GP) need to be improved as well.

Finally, it is hoped that the BJD program world wide will reduce the expected increase in bone and joint disorders by 25% at the end of the current decade.

The BJD-India is officially recognized by the Government of India. At present, India does not have a national program of any kind concerning rheumatic diseases. BJD-India has experts from related medical disciplines, especially orthopedics and rheumatology. Public and medical professional programs have been held in several regions of India, from Jammu to Chennai. For the first time in India, BJD-India has recently sponsored major research programs in arthritis and osteoporosis to be conducted in Chennai, Delhi, Nagpur, Jammu and Pune in 2003-2004. Mission Arthritis India (MAI) is a founder member of BJD-India and supports and shares its vision in providing awareness and knowledge to the community about bone and joint disorders.

You can send your query on BJD-India by email to bjdindia@vsnl.net. You can also support this cause by becoming a member of the BJD. This MAI anniversary issue contains a BJD membership form.

बी.जे.डी - स्थापना व कार्य

ऑटाइब्रायोगियोक्रूक्च्या (Antibiotics) उपयोगाद्वारे तथा ओस्ऱ्याच्या वाढत्या वेब्या अंशांतील घटन्यासाठी. व्याधीच्या, नाशकाच्या व अन्य दशकाच्या सुरुवात (bone & joint decade BJD) एक सम्मेलन झाली. या सम्मेलन न्युमेटिड्ड आर्थिटिस (Rheumatoid Arthritis) आंताकुर्याच्या (Osteoarthritis), मण्डलाच्या आर्थिटिस (spinal disorders) औषधिपोषणिक (Osteoporosis-अस्थिक्षय) अपघाताद्वारे होणारे आंतात ५ महान्युत्पूर्ण व्याधिवर लक्ष केलेलेले दर्जकार्य वाढवणे आहे.

तरण वर्गीकरण RA व अपघाताद्वारे व्यंग उत्पन्न होऊन शकते तर वृद्धावयाच्या OA व अस्थिक्षयाच्या व्यंग उत्पन्न होऊन शकते. ६० व्या वयावरील ५०% लोकांमध्ये कोणत्या नाकोणत्या प्रकाराचे अस्थिशिरसंधान आर्थिटिस दिशेदूर केला. १३-१६% लोकांमध्ये कोणत्या नाकोणत्या प्रकारची अस्थिशिरसंधान वेळेना अस्थियांचे भागावत येथील पहाणीत आहेत आहेत.

जगात लक्षात लोक आंताकुर्याच्या चौथ्या आर्थिटिस किंवा व्याधीच्या त्रैस अंशांना आंतात अस्थिक्षयातील वाहतूक घातक बनले. कारण त्याच्या ५० वर्षांच्या संख्येच्या २०२० पर्यंत जवळ जवळ लुप्तपणे फूल्यावस्था असले म्हणजेच राजकीय क्षेत्रात.

महिलांच्या आरोग्य विषयात तक्रातील OA चौथ्या क्रमांकावर व पुरुषांमध्ये ५ या स्थानावर असेल.

साध्य जवळ जवळ १२ अवर लोक न्युमेटिड्ड हार्ट डिस्जिज (RHD)
ने प्रस्तुत आहेत. RHD हा दुर्मिलक फॉक्स आर्थिकाणुशास्त्रमुक्त होतो व रचावे निदाने उपचार लवकर झाले तर वराकावये येतो. RHD हा जंतू संरक्षणमुक्त होतो व हा दाखला येतो. रसस्वार्थवीर दुर्लभता ह्या हृदयरोग, कर्करोग या सारख्या मुद्देसाठी काहीची राज्यी श्वेत्यांक करत आहेत व 2020 सालापत्तक ते आजार व मृत्यूसाठी काही राज्यी होऊ शकते. दर वर्षी २,००,००० लोक रस्त्या दुर्लभतेनुसार मृत्यू पायलतात, जे मृत्यूवस्रो अंदाजे १० वे कारण आहे (जागतिक आरोग्य संघटनेचा आहवान १९९९). २०१० सालापत्तक प्रगतीशील राष्ट्रांनी २५ टके खर्च आघातसंबंधी व्याधीकरक केला जाईल. आर्थिकाणुशास्त्र मुक्त होणाऱ्याचे प्रमाण गेल्या देशात दुमाटीने बाढळे आहे व ५० वर्ष व्याधीकरक अंदाजे ४० टके महिला आर्थिकाणुशास्त्र मुक्त होणाऱ्या आर्थिकाणुशास्त्रमुक्त तस्तू होतील. (कारण रजिनीशेंटल महिलांमध्ये आर्थिकाणुशास्त्राचे प्रमाण बाढळे.) योग्य काळजी पेढली नाही तर रात्रिविध्या असाध्ये भंग होणाऱ्याचे प्रमाण १९९० मध्ये १.५ मध्ये राशी इतरकाले होते ते २०१० सालापत्तक ६.३ अंगे अथवा इतरकाले गेल्या दशकांमध्ये आयुर्विज्ञानाच्या वाढीवर्धनाच्या आहार बदलामुळे प्रगतीशील देशांमध्ये रोगांमध्ये ही वाढ झालेली आहे. प्रगतीशील देशांमध्ये आसंण्यांत मृत्यूचे प्रमाण ४० टके इतके आहे व हे आजार औषधिमुक्त राष्ट्रांनी तुलनेत प्रगतीशील राष्ट्रांच्या तरुणांमध्ये जास्त प्रमाणात आबळलतात. ध्येय- अस्थिष्ठ-संधीपीत व्याधीचा समाजाची पद्धती अतिरिक्त बोपाची हातीय कला देणे.

संधीपीत व इतर अस्थिष्ठ-संधीपीत रोगांचे निदान उपचार व प्रतितिबाधित संधीपीत

अस्थिष्ठ-संधीपीत व्याधीचे निदान व उपचारमध्ये सुधारणा करणे. वैद्यकीय महाविद्यालयांनी कमीत कमी ६ महिलांचे प्रायोगिक शिक्षण द्यावे. जनरल प्रॉक्सिम्सचे कॉशल्या वाढवणे. येथील शतकाच्या शेवटी संधीपीत, अस्थिष्ठ-संधीपीत मुक्त होणारे अस्थिष्ठ, तीव्र आधार इ. व्या संघवाय आकडेवारीत २५ टके नी घट होईल अशी आशा आहे.

डा. अरविंद चोप्रा
नेशनल सेक्रेट्री, बी.जे.डी. (इंडिया)
नेशनल अंबुलेंस नेटवर्क

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Ceremonial lighting commemorates the inauguration of the bone and joint decade in India.

Dr. K. Phadke, Mission Arthritis India
WHAT IS A JOINT?
A joint is a junction of two or more bones. It gives movement and mobility in our various day to day activities like walking, running, cycling, sitting, getting up (arising) etc.

TYPES OF JOINTS:
There are three main types of joints in our body depending on the type of material present between the two joining bones.

1. Fibrous Joints: The two bones are separated by a thin fibrous tissue. Adjacent bones are thus attached firmly together. So, no movement is possible between the two joining bones.
   Example, cranial bones in the skull are joined by fibrous joint.

2. Fibrocartilagenous Joints: The two bones are separated by a fibrocartilage which is flexible so a little movement is possible between the bones.
   Example, in the spine, the intervertebral discs and also in pubic symphysis the two hip bones are joined by fibrocartilagenous joints.

3. Synovial Joints: These joints are most mobile of all joints. Gross movement is possible in these joints because the two joining bones are separated by a joint space containing synovial fluid. Most of the joints we use in our day to day life are synovial joints.
   Examples the knee, elbow, hip, ankle etc. are all synovial joints.

TYPES OF SYNOVIAL JOINTS

- Capsule: The ends of the joining bones are covered by a fibrous covering known as joint capsule. It makes the joint compact and strong and also encloses the joint cavity which is filled with synovial fluid.

- Hyaline Cartilage: The free ends of the bones are covered by hyaline cartilage. It is not as hard as the bone and therefore it is not seen on X-ray. It provides two smooth apposing surfaces which have very little friction between them for easy articulation (joining). It also provides an elastic tissue which gets deformed easily so that load from one bone gets evenly distributed on to the other bone. This prevents erosion during motion and loading. Sometimes additional fibrocartilage pads divide the joint cavity completely (Discs, in the spine) or partially (Menisci, in the knee).

   Hyaline cartilage does not have its own blood supply and thus gets its nourishment from synovial fluid present around it.

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Dr. Ekta Chanchani

Parts of a Synovial Joints

- Hinge
- Pivot (peg-in-hole)
- Pivot (swing)
- Sliding
- Ball & Socket

- e.g elbow
- e.g proximal radioulnar
- e.g distal radioulnar
- e.g apophyseal joints
- e.g hip
Synovial Membrane: This membrane is present on the inner side of capsule and on the ends of bone present inside the capsule. It is made up of cells and elastic tissue. It secretes the synovial fluid. It has a very rich blood supply.

Synovial Fluid: It fills up the joint space and is useful because it provides lubrication to the joint and thereby reduces the friction between the two bones.

Ligaments: They are thickened portions of the capsule or separate fibrous structures. They help to make the joint strong.

Bursae: They are sacs which are filled with fluid. They are important because they allow easy and smooth movement between the two bones.

Enthesis: The site of firm attachment of fibrous structures (tendon, ligament, capsule) on to the bone is called enthesis. This site is often inflamed through mechanical trauma or are involved in inflammatory disease, e.g. inflammatory arthritis or spondyloarthropathies.

Muscles: The muscles are important for active movement of a joint. Contraction of one muscle (or a group of muscles) is always accompanied by relaxation of the opposite muscles, thus balancing and giving power to the joint movement.

Tendons: They act as bridges between muscle and bone. They help in motion and also help to make the joint stable.

The range of movement and stability of the individual joints depends on:
1. Shape of the joining surfaces.
2. Strength of the capsule.
3. Ligaments.
4. Muscles acting across the joint.
5. Presence of adjacent structures.

It is important to understand the structure of a joint because different types of arthritis involve the different types & different parts of a joint.

For example, in rheumatoid arthritis, the synovial membrane gets inflamed causing pain. Cells get collected on the membrane forming a structure known as PANNUS. This pannus causes erosion of cartilage & bone, leading to deformities.

In seronegative arthritis, including infective arthritis, reactive arthritis and degenerative arthritis, including osteoarthritis, and spondyloarthritis, the fibrocartilaginous joints and fibrocartilage (hyaline cartilage) of the synovial joint is affected.

In degenerative arthritis, erosion of the cartilage occurs, reducing the joint space & thereby increasing the friction between the two bones during movement causing pain.

References: (1) Osteoarthritis (3rd ed.) Diagnosis & Medical / Surgical Management. (2) Rheumatology Examination & Injection Techniques (2nd ed.)
AN OVERVIEW OF ARTHRITIS

Dr. Vinaya Kunjir

ARTHRITIS – CONCEPT AND CLASSIFICATION

The term ‘arthritis’ refers to disease of the joints, characterized by pain, inflammation & swelling of the joints. Rheumatism is a broad based term which describes diseases affecting joints and associated soft tissues like tendons, ligaments and muscle attachments.

The effects of arthritis are different for each person. Some people are affected over many years, others for only short periods. Symptoms vary in severity as do the number and type of joints affected. The age, circumstances and attitude of people with arthritis often affects how well they cope.

Arthritis can be broadly classified into the following groups:
1. Non-infective inflammatory arthritis, like Rheumatoid Arthritis, Childhood Rheumatic Diseases.
2. Connective tissues Diseases.
3. Spondyloarthropathies.
5. Arthritis associated with infections.
6. Arthritis associated with degenerative, metabolic and endocrine disorders.
7. Soft tissue Rheumatism.

I) Non-infective inflammatory Arthritis :
   a) Rheumatoid Arthritis := It is a systemic chronic disease, characterized by symmetric polyarticular joint pain and swelling, morning stiffness, malaise & fatigue. It occurs in about 1% of world’s population with twofold to threefold female predominance. Rheumatoid Factor, immunoglobulins & auto-antibodies are the main serological markers found in about 80% patients. During the past 10 years, epidemiological studies have unearthed information about the true potential of this disease. Rheumatoid Arthritis is a chronic disease that leads to joint damage within first 2 years of onset, causes marked functional limitation and 30% loss of work within first 5 years and shortens life by 5-7 years. Hence, this aggressive disorder demands the early institution of an equally aggressive therapeutic approach aimed at altering the disease course and maintaining function.

   b) Childhood Rheumatic Diseases := The rheumatic diseases of childhood represent a diverse group. A majority of these result from the combination of genetic predisposition, autoimmunity and unknown environmental factors. To be designated juvenile rheumatoid arthritis (JRA), the arthritis must start before the age of 16 years and must last for more than 6 weeks. The common forms of chronic synovitis in childhood are Juvenile Idiopathic Arthritis, Rheumatic fever arthritis, spondyloarthropathies and arthritis associated with vasculitis.

   Unless diagnosed early and treated adequately, some forms of the disease may lead to crippling disability and blindness from chronic eye complaints. However, with combined efforts of a multidisciplinary health care team, education and support of the family members, most young patients can now hope to lead a near normal life and keep away from the confines of a wheel chair.

II) Connective Tissue Diseases :
   a) Systemic Lupus Erythematosus(SLE) := It is a multisystem disease with a spectrum of clinical
manifestations and a variable course characterized by relapses & remissions. SLE is marked by multiple autoantibodies that may participate in tissue injury. Fever, skin rash and arthralgia are the main clinical presenting features of this disease. The most common organs affected are skin, heart, lungs, eyes, brain and gastro-intestinal tract.

b) Systemic Sclerosis or Scleroderma :- It literally means hard (skleros) skin (derma) and consists of both, disease restricted to the skin (localized scleroderma), and disease with internal organ involvement (diffuse scleroderma). Diffuse scleroderma is also called as systemic sclerosis. Systemic sclerosis is an acquired noncontagious disease that occurs worldwide in sporadic cases.

c) Sjo"gren’s Syndrome :- It is a chronic inflammatory disease associated with inflammation of exocrine glands. Dry eyes and dry mouth are the 2 characteristic findings of this disease. Sjo"gren’s syndrome can be primary or secondary depending upon the absence or presence of connective tissue disorders. Rheumatoid arthritis and SLE are the most common connective tissue disorders seen in association with secondary Sjo"gren’s syndrome.

d) Polymyositis (PM) and Dermatomyositis (DM) :- It is an inflammatory disease of skeletal muscles. Sometimes when a characteristic rash is present, the term used is Dermatomyositis. PM occurs at any age but mostly between 40-60 years with mild female preponderance. A childhood form of DM is also recognized. Current thoughts relate to abnormal changes in immune system that lead to development of cells capable of injuring muscles. The presenting features are proximal muscle weakness, characteristic skin rash of DM and elevated serum muscle enzymes.

e) Vasculitis :- It is a heterogenous group of diseases which consist of inflammation & necrosis of the walls of blood vessels. Vasculitis may be a primary process or secondary to other diseases such as SLE, RA. Early recognition and prompt treatment of vasculitis is essential. If the condition is unrecognized, infarction of vital organs, renal failure and death may follow.

III) Spondyloarthropathies :

a) Ankylosing Spondylitis (AS) :- It is an inflammatory disorder of unknown etiology that primarily affects the spine, axial skeleton and large proximal joints of the body. The distinctive feature of the disease is the progressive fibrosis and ankylosis of involved joints. Most commonly affected are young men in the age group of 20 to 40 years. AS has a strong association with HLA B27 histocompatibility antigen.

Although AS is not curable, most patients who maintain disciplined exercise and posture programmes and take anti-inflammatory medication can lead relatively normal & active lives with minor adjustments in lifestyle.

b) Enteropathic Arthritis :- It is an inflammatory arthritis that occurs 1-3 weeks after an acute intestinal infection with certain bacteria (Shigella, Salmonella, Yersinia species). The larger joints of extremities are usually affected. It is usually seen in a patient positive for HLA B27.

c) Psoriatic Arthritis :- It is an inflammatory arthritis occurring in 5% to 7% patients with psoriasis. Some patients may have co-existing psoriasis and rheumatoid arthritis. Family studies suggest an extremely high (>50%) risk in first degree relatives of patients with arthritis. The patients present with asymmetrical involvement of distal joints of hands, psoriatic skin changes & nail changes. The severity of arthritis tends to parallel the severity of skin disease. Milder forms have good prognosis. Approx 5% of patients develop severe disabling and deforming arthritis.

IV) Crystal Arthropathies :

a) Gout :- It is the name given to clinical manifestations caused by deposition of uric acid in the tissues. This results in acute arthritis or chronic deforming arthritis associated with deposits of uric acid in the subcutaneous tissues (tophi) or renal stone disease. Gout is mainly a disease of adult men and post menopausal women. Risk factors for development of gout include obesity, family history of gout, renal insufficiency, diuretic drugs, high alcohol intake & exposure to lead.

b) Pseudogout :- It is an inflammatory arthropathy with acute & chronic forms caused by deposition of calcium
pyrophosphate(CPPD) crystals in the joints. Aging, OA, genetic defects and certain metabolic diseases cause changes in cartilage that enhance deposition of CPPD crystals. These crystals are shed in the joints & cause inflammation in the joints.

Although pseudogout itself has no known effects on life expectancy, associated diseases carry their own prognosis. Joint symptoms can be controlled by antiinflammatory therapy.

V) Arthritis Associated With Infections :

a) Infectious or septic arthritis :- The microorganisms, commonly bacteria, invade the synovial membrane and joint space, and cause inflammation and tissue destruction and subsequently loss of joint function.

b) Rheumatic fever arthritis :- Rheumatic fever arthritis is preceeded by infections with specific types of bacteria in the throat and upper respiratory tract. These bacteria evoke an abnormal immune response in the joints & sometimes in the heart & kidney also.

VI) Arthritis associated with degenerative, metabolic and endocrine disorders :

a) Osteoarthritis (OA) :- It is the most common musculoskeletal problem in people over age of 50 years. It may be initiated by multiple factors like genetic, aging, metabolic and traumatic causes. OA is characterized by joint pain, tenderness, limitation of movement, crepitus and variable degrees of local inflammation. The most commonly affected joints are knees, spine, hip, small joints of hands and feet.

b) Osteoporosis (OP) :- It is a condition in which bone mass is below normal for a person’s age, sex and race. This leads to defects in the bone structure and susceptibility of bones to fractures. Nutritional deficiency, smoking, alcoholism, diabetes, chronic illness, menopause and long term use of drugs are the risk factors of OP.

c) Endocrine Arthropathies :- The musculoskeletal manifestations in endocrine diseases like diabetes, hypo or hyper thyroidism are variable. They include muscle pain or weakness, neuropathies and osteopenia.

VII) Soft tissue Rheumatism (STR) :- STR describes a number of syndromes which are characterized by widespread pain and diffuse tenderness. The syndromes are :-

a) Fibromyalgia (FM) :- FM is a painful, non-inflammatory condition characterized by tender points at discrete regions of the body. Factors such as physical trauma, infection, autoimmune disorders, endocrine disorders and emotional stress seem to be capable of “triggering” the development of FM. Although FM is a chronic illness, most patients can lead a relatively normal life with proper management.

b) Occupational Overuse Syndrome (OOS) :- Due to repeated movements (usually work related), muscles become stiff and painful. Pain causes more muscle tension & so the muscle keeps on paining even after the work is stopped. A painful and stiff muscle causes the surrounding muscles to do the same in sympathy. For example - a farmer has pain in forearm muscles, as he makes repeated use of the hand while reaping & cutting, but the pain may spread to muscles of neck & shoulders also.

c) Regional Myofascial Disorder :- In this disorder, the pain is more limited in distribution. It may be confined to a particular region, for example, pain in heels and calf due to prolonged standing.

Any form of arthritis can be effectively treated with modern therapeutic and supportive regimens. The therapeutic success in chronic forms of arthritis depends upon the state of disease at which long term treatment has begun. Arthroscopy of certain joints may be surgically done to remove the cause of pain and disability. A totally useless but painful joint may be replaced by an artificial prosthesis to restore painless function.

A lot of research is being done to formulate new medicines which will cure arthritis at an early stage without causing many side effects. New methods are being developed to correct the "immunological" abnormalities which cause damage to the joints in arthritis.

But the success of treatment depends not only on drugs
but also on the support of the family members of the patient, regular exercises and positive change in mental attitude of the patients.


JOKE

A man, who smelled like a distillery, flopped down on a subway seat next to a priest. The man's tie was stained, his face was plastered with red lipstick, and a half empty bottle of gin was sticking out of his torn pocket. He opened his newspaper and began reading.

After a few minutes the disheveled man turned to the priest and said, "Say, Father, what causes arthritis?"

"Mister, it's caused by loose living, being with cheap wicked women, too much alcohol, and a contempt for your fellow man."

"Well, I'll be damned," the drunk muttered, returning to his paper.

"The priest, thinking about what he had said, nudged the man and apologized. "I'm very sorry, I didn't mean to come on so strong. How long have you had arthritis?"

"I don't have it, Father. I was just reading that the Pope does."
पाँच वर्षभूमि
RA हां संधिवातिक अनेकविध प्रकारपूर्वी प्राकृतिक रूप से आबादणरा एक प्रकार. सौंप्य संधिवातिकपूर्वृत ते वीर्यकारी संधिवात / सांधिवासिता विवृती निम्न रूप रूपांतरण करण्या हा संधिवात सांधिवान्त शरीरातील इतर संस्थानी (पुष्पक, लोहा, त्वचा का. प्रयात / आलक्ष्य गंधर निरपेक्ष पावन गडू शकतो. सतत राहणारी सांधिवान्त सूची, वेतना, विवृती यामुखे रूपाणिता कार्यक्षमतेवर प्रारंभ प्रानुभाव महाद येतात. परापरस्थित येते. तीर्थ स्वरुपांतिल अनिवार्य संधिवात आपूर्यांदा ५ ते ६ वर्षाची कमी करत अलग आणखी आडून आले आहे. विवृती, परापरस्थित, आंदोलनित निर्माण करण्या हा संधिवात फक्त शारीरिक स्वस्थ तर मानसिक, आर्थिक व सामाजिक पात्रावस्थावरील प्रश्न / अडचणी उभय करतो.

महानुष्ठान या संधिवातिक लवकरित लवकर निदान व योग्य अभ्योध्याय सुरू झाल्यांना पाहिजे.

तज्ज्ञ डॉक्टोरच्या मार्गदर्शनानुसार सुरू झालेल्या योग्य अभ्योध्यायाच्या व संधिवातिक पूर्ण विषयांमध्ये मिळणारे सहज शक्त आहेत. याविष्कारशी शोधकार्याला माहिती घेतून - उपचारपद्धतीमध्ये सवे अंगांना विचार केला जातो.

१) आयोगित नेहमी व किंवा आयोगी, विधान / विधान कार्यालय. 
२) उच्चक्रमांक आवश्यकता / भूमिका 
३) इतर - पुष्पक प्रदर्शन उपयोग - विशेषता / व्यायाम (Physiotherapy occupational therapy ह.) 
४) पेशेंद्वृत नीतिस्थापन व शिक्षण (Education & Counselling)

उपचारांकी प्रमुख उद्देश्यांचे:

१) वेदनासुदूर संपूर्ण पुण्याचे 
२) संधिवातिक कार्यक्षमता असणाऱ्या प्रतिकारकांशी पूर्ण ग्रंथकार नियंत्रण.

३) सांधिवातिक होणारी झीर्ज थांबण्यावर / कमी करणे. सांधिवातिक विवृती टाळण्यावर / लंबवण्यावर.

४) सांधिवातिक कार्य पुनर्बांधणी करण्यावर / कार्यक्षमता वाढण्यावर.

* खालील ५ प्रकारातील / वर्गांची आळोषेस सध्या उपलब्ध आहेत.

१) वेदनाशामक (Pain Killer) 
२) सूज कमी करण्याची (Antiinflammatory agents - NSAIDS) 
३) रोगपरिवर्तन करण्याची (diseases modifying antirheumatic drug) 
४) स्टिरोईड्स (Steriods) 
५) नवीन प्रतिज्ञेयक आळोषेस (Newer biological agents)

आळोषेस सुरू करण्यापूर्वी पेशेंद्वृत व सवे बाजूला विचार केला जातो. - पेशेंद्वृत वय - इतर आजार (रक्तदाब, मधुमेह, वूक्लिंड / ग्लुकोजेच आजार) 
- संधिवातिक तीव्रता (सौंप्य, तीव्र, सांधिवातिक लक्षणे) 
- रक्तचालणी, आर्थिक स्थिती 
- तरण वियंदम्यांनो - गोळी, दूष पात्रावस्था मात्रा 
- सवर्णसाधारणपणे, सौंप्य स्वरुपाच्या संधिवातिक पद्धती तीन वर्षांतरील आळोषेस वापरली जातात तर ती व्यवस्था या आळोषेस आहेत स्टिरोईड्स राहून ठेवली जातात. नवीन प्रतिज्ञेयक आळोषेस सांधिवातिक अत्यंत तीव्र / अनिष्ठ विषयांतरील वापरली जातात.

ही आळोषेस Step Down, Reverse pyramid स्वरुपाच्या दिली जातात. महानुष्ठान संधिवातिक लवकर नियंत्रण करण्याचल DMARD + NSAID + वेदनाशामक + Sterioids सुरू केली जातात व संधिवातिक चालू नियंत्रण येऊन लागणे की आळोषेसी मात्रा (डोस तर कमी करता येऊनच पण २, ३ DMARDS पॉडी एकादेमी आळोषेस, NSAIDS, PAINKILLERS), कमी होते.
1) Non-steroidal anti-inflammatory drugs (NSAIDs) -

Paracetamol, Combiflam, Aspirin, Brufen, Voveran, Nimesulide are some examples of NSAIDs. They are known to cause peptic ulcer disease, hypertension, and renal failure. NSAIDs should be used with caution in patients with a history of peptic ulcer disease or renal impairment.

2) Corticosteroids -

Corticosteroids are potent anti-inflammatory agents that are used to treat a variety of conditions, including arthritis, asthma, and allergies. They work by suppressing the immune system and reducing inflammation. Corticosteroids can cause a range of side effects, including weight gain, muscle weakness, and increased risk of infection. They should be used with caution in patients with a history of diabetes, glaucoma, or osteoporosis.

3) Disease-modifying antirheumatic drugs (DMARDs) -

DMARDs are used to treat rheumatoid arthritis and other inflammatory diseases. They work by suppressing the immune system and reducing inflammation. DMARDs can cause a range of side effects, including liver damage, anemia, and infections. They should be used with caution in patients with a history of liver disease, anemia, or infections.

4) Biologic therapies -

Biologic therapies are a newer class of DMARDs that work by targeting specific molecules involved in the immune response. They are used to treat rheumatoid arthritis and other inflammatory diseases. Biologic therapies can cause a range of side effects, including infusion reactions, infections, and malignancies. They should be used with caution in patients with a history of malignancies or infections.

5) Traditional Chinese Medicine (TCM) -

TCM is an ancient Chinese system of medicine that uses herbs, acupuncture, and other techniques to promote health and treat disease. TCM can be used to treat a variety of conditions, including arthritis, asthma, and allergies. TCM should be used with caution in patients with a history of bleeding disorders, pregnancy, or lactation.

6) Herbal supplements -

Herbal supplements are made from plants and are often used to treat conditions such as arthritis and allergies. Herbal supplements can be used alone or in combination with other therapies. They should be used with caution in patients with a history of drug allergies or liver disease.

7) Probiotics -

Probiotics are live microorganisms that are used to treat conditions such as diarrhea and immune dysfunction. Probiotics work by restoring the normal balance of gut bacteria. Probiotics should be used with caution in patients with a history of immunodeficiency or chronic diarrhea.

8) Prebiotics -

Prebiotics are plant-based fibers that are used to treat conditions such as diarrhea and obesity. Prebiotics work by stimulating the growth of beneficial gut bacteria. Prebiotics should be used with caution in patients with a history of diabetes or liver disease.

9) Synthetic and natural hormones -

Synthetic and natural hormones are used to treat conditions such as breast cancer and prostate cancer. They work by altering the balance of hormones in the body. Hormones should be used with caution in patients with a history of hormone-dependent cancers or hormone-related disorders.

10) Radiation therapy -

Radiation therapy is a type of cancer treatment that uses high-energy radiation to destroy cancer cells. Radiation therapy can cause a range of side effects, including skin changes, hair loss, and fatigue. It should be used with caution in patients with a history of radiation exposure or radiation-related disorders.

11) Chemotherapy -

Chemotherapy is a type of cancer treatment that uses drugs to destroy cancer cells. Chemotherapy can cause a range of side effects, including hair loss, nausea, and vomiting. It should be used with caution in patients with a history of chemotherapy-related complications or chemotherapy-related disorders.

12) Surgery -

Surgery is a type of cancer treatment that involves the removal of cancerous tissue. Surgery can cause a range of side effects, including pain, swelling, and infection. It should be used with caution in patients with a history of surgery-related complications or surgery-related disorders.
DMARDs (disease modifying antirheumatic drugs) are a class of medications used to treat rheumatoid arthritis and other chronic inflammatory diseases. They work by reducing inflammation, pain, and joint damage, and by slowing the progression of the disease.

- **Etanercept/infliximab** and **steroids** are used in the management of rheumatoid arthritis. These medications are often combined with other treatments, such as physical therapy, exercise, and surgery, to provide a comprehensive approach to managing the disease.

- **Physiotherapy** and **counselling** are also important in the management of rheumatoid arthritis. These treatments can help to improve the function of the affected joints and reduce pain and stiffness.

**References:**
- Manual of Rheumatology and Outpatient Orthopaedic Disorders - Paget et al.

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**Dealing With Rheumatoid Arthritis**

Rheumatoid Arthritis (RA) is a chronic, autoimmune disease that causes inflammation and erosion of the lining of the joints, resulting in pain, swelling, stiffness, and joint damage. RA often affects the small joints of the hands and feet, but can also affect other joints, such as those in the wrists, knees, and ankles.

**Symptoms:**
- Morning stiffness
- Joint pain
- Joint swelling
- Joint damage

**Causes:**
- **Autoimmune response:** The immune system mistakenly attacks the body's own tissues, causing inflammation and joint damage.
- **Genetic factors:** People with certain genetic markers are at higher risk for developing RA.
- **Environmental factors:** Smoking and certain infections have been linked to an increased risk of developing RA.

**Treatment:**
- **Medical management:** This includes medications to control inflammation and pain, and to prevent joint damage.
- **Physical therapy:** Helps to improve joint function and reduce pain.
- **Surgery:** May be needed to replace damaged joints or to remove tissue that is causing pain or stiffness.
- **Counselling:** Helps patients to manage the emotional impact of the disease.

**Prognosis:**
- RA can affect different people differently, so the prognosis varies. With current treatments, many people with RA are able to manage their symptoms and maintain a good quality of life.

**Dr. Vaijayanti Lagu - Joshi**

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**References:**
- (1) Manual of Rheumatology and outpatient Orthopaedic Disorders - Paget et al.
- (2) Oxford Textbook of Rheumatology - Meddison.
1. Is laboratory testing essential for Rheumatoid Arthritis and other Rheumatic diseases?

   The basis of the practice of rheumatology is clinical diagnosis. The history and physical examination of the patient presenting with symptoms of rheumatic disease are usually diagnostic. However, laboratory testing becomes extremely essential not only because it provides supportive evidence, but also because the information received from the laboratory tests helps to monitor disease activity.

2. When does a doctor advise on laboratory tests?

   Laboratory tests may either be:
   1. Diagnostic tests or
   2. Evaluative tests.

   Diagnostic tests are those that differentiate individuals who have the disease from those who do not have the disease. These tests are usually concerned only with the current status of the individual being tested.

   Evaluative tests are concerned with measuring changes in clinical status or disease activity. The goal of evaluative testing is to compare the current status of a patient with his status at a previous point of time to determine if improvement or worsening has occurred.

   Some laboratory measures may be useful as both diagnostic and evaluative tests. However, some tests that are useful diagnostic tests may not be good evaluative measures.

3. What are the routine lab test that a patient with rheumatic complaints needs to undergo?

   The first time a patient visits the rheumatologist, one needs to have a baseline value of a total body profile along with the essential diagnostic tests and also some tests to indicate the disease status of the individual. On subsequent visits, it is essential for every patient on treatment to undergo a minimum number of tests which may indicate either improvement or deterioration of the condition of the patient or for observing any toxicity/adverse effects of the medication.

   These include:
   1. Haemogram/Complete blood count
      This test includes
      (a) Haemoglobin (HB): It indicates whether the patient is anemic, the nutritional status and also gives an idea of the disease activity.
      (b) Total leucocyte (white cell) count: It is an important test for patients who are on steroids. It is also helpful in differentiating patients with diseases like SLE, Sjögren’s syndrome, MCTD and Felty’s syndrome, in whom the count is low from those with Inflammatory Rheumatic Disorders, Systemic Vasculitis and Juvenile Arthritis in whom a high count is observed.
      (c) Differential leukocyte (white cell) count: This test gives and indication of a co-existing infection, vitamin deficiency, splenomegaly etc.

   2. Platelet Count

   Platelet count is a measure of disease severity and also a measure of disease activity. This test is very essential and needs to be done every 2-3 months.

   3. Erythrocyte Sedementation Rate

   The ESR test is a useful, simple and less expensive test which indicates disease severity. It is also useful for serial measurements when monitoring patients who lack clear clinical markers or who are taking anti-inflammatory or slow-acting antirheumatic drugs. The ESR test is believed to correlate with the severity of inflammatory disease, but some patients with active rheumatic diseases may have a normal ESR level. However, the ESR can also be elevated by conditions unrelated to rheumatic disease, such as aging, anemia, infection, pregnancy, trauma, malignancy and stress. It is usually higher in women than in men.

   4. Rheumatoid Factor (RF)

   This is a test used to confirm the diagnosis of Rheumatoid arthritis. However, a negative test does not rule out the diagnosis of Rheumatoid arthritis. Rheumatoid Factor is positive in 75-80% of patients suffering from RA. If RF test is positive, it is essential to quantitate the value further in order to know how strongly positive the test is from the normal range in the given population. An RF value of less than 20 IU/ml is considered normal. In our setting, a
value of more than 40 IU/ml is taken as significant. RA
patients who are RF negative may sometimes show a
positive RF test a few years after the onset of disease.
Similarly, often due to therapy, the RF may become absent.

5. **C-reactive protein (CRP)** –
The CRP test, just like the ESR, is another marker for
disease activity and is an ideal test for following responses
to anti-inflammatory treatment. It is not as simple and
inexpensive as ESR; it takes a day to perform and requires
assay equipment. As with ESR, CRP level/titer can be
elevated by pregnancy, trauma and stress, but it does not
vary with the patient’s age or sex.

6. **Antinuclear Antibody (ANA) Test** -
This test is a special test done to confirm diagnosis of
some rheumatic diseases like SLE, MCTD, Scleroderma
etc. 95% patients with SLE test positive for ANA. The ANA
titer provides more specific information to the clinician.

7. **Anti-DNA Antibody** -
This test is very useful because a high titer is
diagnostic of SLE. The anti-DNA test is also useful
therapeutically because it reveals active disease that is not
necessarily symptomatic.

8. **Serum Uric Acid** -
This test is usually performed in order to diagnose gout.
However, high uric acid levels do not necessarily confirm
the diagnosis of gout. High values of serum uric acid are
usually associated with an increased risk for the
development of gout. Also, it is important to realize that a
normal serum urate level does not exclude the diagnosis of
gout. Often a second determination after the acute attack
has subsided will show an elevated level.

9. **Blood Sugar Level** -
It is always advisable to get a blood sugar level test
done, not only for patients with rheumatic complaints and
are of age above 40 years, but also for those patients
suffering from some of the other rheumatic diseases and
who are on long-term steroids.

10. **Liver Function Tests** -
a mild degree of abnormality in liver function is
observed in patients with diseases like SLE. Liver function
tests are essential for patients with rheumatic diseases to
monitor disease activity and drug toxicity.

11. **Kidney Function Tests (Blood urea nitrogen,
sodium creatinine)** -
The baseline levels of serum creatinine and blood urea
must be known before beginning the treatment with a long
term drug. Kidney function tests are also performed as part
of laboratory investigations for collagen vascular disorders
e.g. SLE.

**CONCLUSION**

Every patient must remember that laboratory data must
be interpreted in the light of clinical findings by the
specialist, keeping in mind situations when false positives
or false negatives may occur. Laboratory tests are
mandatory to monitor the disease activity and safeguard
against drug toxicity in patients on long-term therapy.
Calcium

Calcium (Calcium) is a mineral that is important for bone health and the functioning of muscles and nerves. It plays a key role in maintaining bone density and preventing bone loss, which can lead to conditions like osteoporosis.

Osteophytes

Osteophytes (Osteophytes) are bony growths that can form at the edges of cartilage or bone adjacent to joints. They can cause pain and may develop in conditions like osteoarthritis or degenerative arthritis.

Gout

Gout (Gout) is a form of arthritis characterized by severe pain and inflammation in the joints, particularly in the feet and toes. It is often caused by high levels of uric acid in the blood, which can lead to the formation of urate crystals in the joints.

Computed tomography

Computed tomography (Computed tomography) is a medical imaging technique that uses computerized images of the body to diagnose and monitor medical conditions. It is commonly used to detect or evaluate diseases affecting bones or soft tissues.

Sacroiliac Joint

Sacroiliac joints (Sacroiliac Joints) are the joints between the sacrum and the ilium of the hip bones. They are important for maintaining the stability of the spine and transferring weight from the spine to the legs.

Infertility

Infertility (Infertility) is the inability to conceive a child after 12 months of regular, unprotected sexual intercourse. It can be caused by factors in either the male or female partner or both.

Leukaemia

Leukaemia (Leukaemia) is a type of cancer that involves the bone marrow and blood. It can lead to the production of abnormal white blood cells and affect the immune system.

Psoriasis

Psoriasis (Psoriasis) is an autoimmune skin condition characterized by red, scaly patches on the skin. It can also affect the nails and joints and can impact the quality of life for those affected.
Use of X-rays, C.T. Scan and MRI for Diagnosis.

Radiology plays an important part in diagnosing and characterizing the type of arthritis. Various radiological modalities come handy for the purpose, however X-ray remains the most basic and most widely used modality.

X-rays can pass through the soft tissues of body, however are variably attenuated by calcium in bones giving rise to excellent pictures of bones, joints and articular surfaces. They also give an indirect idea of joint space and cartilage. In degenerative arthritis, there is joint space narrowing, subarticular sclerosis, erosions and osteophytes formation, while in rheumatoid arthritis there is initially joint space widening with periarticular osteopenia with soft tissues swelling. Slowly, there is joint space narrowing, articular erosion finally leading to ankylosis (bony fusion) and deformities. In psoriasis, there is abnormal bone formation, particularly along the sides of vertebrae with large osteophytes and occasionally bone sclerosis. In ankylosing spondylitis, spine has a "Bamboo" like appearance.

CT scan uses X-ray in a slightly different manner, to obtain thin sections of a body part and are used for evaluation of sacroiliac joints, apophyseal joints.

MRI scan is based on imaging with strong magnetic field allowing us to visualize soft tissues like muscles, ligaments, cartilage and synovium like nerves before. It is particularly useful to visualize synovial hypertrophy in RA and to differentiate TB from arthritis. Atlantoaxial joints are also well evaluated with MRI. Sonography has nowadays been used for joint evaluation, particularly for joint fluid, status of capsule, ligaments and muscles.

We cannot do without medicines in today’s time and place. Sometimes, they find a place only next to food and water. In fact, you will often find medicine bottles (still better if they are foreign!) on dining tables in many a home. People have accepted vitamins and minerals as essential dietary supplements. Children are also forced to take these pills under the pretext of strengthening mind and body. Everyone wants quick relief. And often, these medicines have to be taken for prolonged period of time which may even become a lifetime. Medicines do save lives. And much quality of life in certain chronic debilitating ailments depends upon medicines.

BUT these very life saving medicines become life threatening when used indiscriminately. To derive the benefits and eliminate the negative effects of medicines they must be used with utmost care and good sense. The culture of over the counter (OTC) medicines and popping pills is very hazardous and destructive.

There are some common misconceptions of people regarding the use of medicines.

1. Medicines are always necessary
   Medicines are NOT always necessary. For example, a common cold will just go away by itself. There is no need of pills and syrups.
   However, some illnesses will not go away without medicines. In these cases, delaying treatment would make the disease worse. Later, it can become difficult to control.

2. Injections are always better
   It is true that any medicine, when injected, has a greater effect. BUT this is needed only rarely. It is also much easier to give too much of a medicine while injecting. This can kill! So injections should be taken only when absolutely necessary, and under the doctor’s guidance.

3. Intake of medicines should be stopped once the symptoms disappear
   When the disease is under control, the symptoms of the disease disappear, but this does not mean that the disease has been CURED. The therapy has to still be continued in most of the cases. For example, TB may be cured completely, but the medication has to be taken for at least one year. After stopping medicines abruptly there is also a greater chance of a severe relapse, besides making the body resistant to the medicine.

   Medicines should be strictly used under the doctors guidance only. They should not be stopped without the course being completed as prescribed by your doctor. Stopping them earlier, results in incomplete cure. Only stop the medicine if there is any sign of allergy e.g. rash on skin, itching, or difficulty in breathing. Your doctor should be consulted immediately if such a side effect occurs. The adverse event may be a coincidence, or it may also be due to other concomitant disease, e.g. an arthritis patient may suffer from diabetes, hypertension or cardiac problem, and the adverse event maybe due to medication prescribed for these diseases.

   But there are illnesses where taking medicines properly is very necessary and delay can cause complications.

4. High power medicine tablets are ‘heaty’ and dangerous
   It is difficult to interpret the concept of ‘heat’ in any drug. Some drugs do produce more acidity and stomach problems. But do not change the strength of the medicine without consulting the doctor. You may take half the prescribed strength of an antibiotic under this wrong impression and make your infection worse or cause germs to become resistant to antibiotic.

5. The power of the medicine depends upon its strength (in mg)
   Medicines are available in many forms, such as tablets, capsules, liquid forms (syrups). The amount of the medicine contained per unit weight or volume is given on the packaging e.g. per 100 milliliters, per teaspoon.
Tablets and capsules are in milligrams. The strength or potency of a 100 mg tablet of any one medicine is not the same as 100 mg tablet of another medicine. Often, tablets used for heart ailments have low strength (e.g. 1 mg), but certain antibiotic tablets may be dispensed in larger strength (e.g. 500 mg). Follow the prescription instructions. In case of doubt, contact the doctor. Do not be guided by the chemist.

Look carefully at the packaging. The dose mentioned should be equivalent to the prescribed dose. For example, suppose you are prescribed 250mg of an antibiotic and the chemist gives you a capsule of 500mg, do not accept it. Do not open capsules to take the drug or divide it into lesser strength.

Measuring liquid is best done with a standard spoon of 5 ml. This is sometimes supplied free with a medicine.

6. Medicine should be taken as few times as possible.
The frequency of medication is often decided by the duration of action of any particular drug. While some drugs in a single dose may work for 24 hours, other drugs with shorter action may require 3-4 times administration. So follow the advice given by your doctor. The doctor always writes the medicine on a sheet of paper called the prescription. This contains written information on the dose required i.e. how much medicine to be taken and when. Always check the prescription before leaving your doctor.

7. One need not tell one doctor about the prescription of another doctor
In case you are suffering from arthritis, as well as from some other disease like hypertension, or any cardiac problem, you may have to visit another doctor for consultation. It is always a must to show all your prescriptions to the concerned doctor, so that he is aware about the past and the current status of your medication. Some medication for diseases such as diabetes, hypertension have to be taken lifelong in the prescribed dose. Stopping them may be very dangerous for you.

8. Medicines have to be taken with meals
Some medicines work best when you take them on an empty stomach. Some medicines work best only on a full stomach, while some work well only when taken with meals. There are certain medicines which should be taken with water and some may have to be taken with milk. The instructions for the same should be strictly adhered to.

9. In chronic diseases, one can take medicine for long periods without consulting doctor especially when the condition is stable
In chronic diseases such as arthritis, your condition might get stable after a certain period of time. But still monitoring of the disease is required to control the disease and prevent it from spreading to the other organs of the body. Hence, it is imperative for you to meet the doctor as advised, even if your pain has disappeared completely. Also, the doctor needs to check you at regular intervals for any drug side effects.

10. Medicines must be gradually stopped
It is true in few cases, like patients who are taking steroids. Steroids should not be stopped abruptly. The dose has to be tapered and brought to a minimum before they are stopped.

11. Several tablets can be taken together
If you are suffering from a chronic disease, you might have to take many types of tablets.

But all these tablets cannot be taken together. Follow the doctor’s instructions about the timing and frequency for all the medication. Drugs can interact with each other and reduce the efficacy. Sometimes when tablets of different medicines are taken together, patients develop serious side effects especially related to stomach.

12. Medicines from different ‘pathies’ can be taken together
Once you are taking treatment from a doctor for a particular disease, it is always better to continue his medicines. Based on past prescriptions, “friendly advice” from colleagues, you may already be consuming both over the counter and prescription only drugs for the same disease from a different pathy. It is advisable to follow only one pathies and minimize complications. A new symptom or sign may not be due to a new disease but the adverse reaction of a drug which is already being taken. Also there is very little scientific rationale to combine medicines from different pathy e.g. Ayurveda, homeopathy with modern medicines.

13. Modern medicines are always toxic
Every medicine with potent benefits has certain side effects and toxicity. Like a missile, which when fired destroys the harmful cause, but also leaves some destruction around it. The same implies more to modern medicine which are more powerful. There is always a concept of the Benefit-Risk ratio to modern medicines. Chronic excessive exposure to any medicine, in particular pain killers, may result in numerous side effects. But all these can be counteracted by following the doctor’s advice on timing of the drugs and consuming lots of fluids, fruits, exercising and regular monitoring for their effect on blood, liver, kidney etc. You should consume 2-3 litres of water daily. Only in certain heart and kidney diseases doctors
restrict the intake of fluids.

14. Ayurveda, Homeopathy and other pathies are not toxic

Actually Ayurveda and Homeopathy do have a element of toxicity. They are less potent in treating an illness and show effect over a long period of time, hence their side effects are generally mild. However, patients can be allergic to any drug. Sometimes serious side effects can be seen with herbal medicines, e.g. Bhallataka (Semecarpus anacardium) more popularly known as “bibba” is a powerful drug used in Ayurveda and known to have numerous medicinal properties. But its side effects are also innumerable such as allergy, hyperacidity, generalized itching and burning sensation and urinary problems.

15. Modern medicines make you weak

It is the disease that makes you weak, your immunity becomes low due to the disease you are suffering and not by the medication you are taking. In few cases, medicines can make you weak e.g. drugs like Methotrexate, which are used to treat rheumatoid arthritis, can weaken your immune system. You can always supplement the medicines by vitamins and healthy and nutritious meals.

MORE TIPS

i) While administering drugs to children special care should be taken. Similarly, special care should be taken while administering drugs to the elderly. Drugs for both the children and the elderly should be given under a family member's guidance only.

ii) The inserts of the medication strip should be read carefully, but they are only to educate you. It is not necessary that the adverse events mentioned may necessarily imply to you. It is mentioned to caution you.

iii) Do not indulge in self-medication. For a short-term illness like flu, over the counter drugs can be taken, but meet a doctor if symptoms persist.

iv) If the symptoms and disease are similar with someone in the family, do not share medication. The same medication may not be effective for the other person.

v) Before purchasing drugs, check for the expiry date.

vi) In acute disease, bed rest is mandatory.

vii) Do not take medicines with alcoholic drinks.

Medicines not only give us relief but they heal and rejuvenate our bodies, but these scientific wonders must always be used scrupulously. Handle them with care based on proper knowledge and guidance. Always follow instructions from the doctor. And in case of doubt, never hesitate to ask the doctor again to explain about the medicine. It is better to be cautious rather than be sorry afterwards.
4. गुणाकारी ओषधेशांक से शरीराटूक ‘ग्राम’ पठल्याने धोकादायक असतात.

‘ग्राम’ पढणे मजेणे काय? त्यांच्या सेवनाने पोटात आकला वाहून जाने होतात? डॉक्टरी सल्याशीलांक ओषधांच्या डास कर्याची केलेल्या त्याचा परिणाम होत नाही. ओषधायोगिकरे प्रमाण आपल्या मनातील केलेल्या जुंतूर त्यांचा परिणाम न होला जतू, त्यानागाद्यात. पोटात आकला न हवाती याकला तसेच ओषधे आहेत.

5. ओषधांच्या तक्तल्यांच्या डॉटसर्च ग्लामावर अवलंबून असते

ओषधेचे ही गोळ्या, केंपसूल, सिरप अशा स्वरूपात देतात. पालंड्रमात्वानितूल घायलावर ओषधाचे प्रमाण हे मिलीजीटर किंवा चवचवा चवचवा गोळ्यांचे मिलीग्या मध्येप्रमाणे असते. प्रत्येक ओषधांचे लाई, पत्त्यांचे प्रमाण वेगळ्याला असते. एकाहा ओषधाची 100 मिलीग्या मध्ये दुसरा ओषधाची 1 मिलीग्या गोळी पुरते. ओषधायोगिकीच्या गोळ्या 100 मिलीग्या घायलावर असते. या बाबतीतील ओषधाविकेयावर अवलंबून न रहाता तुम्हाला योग डास करा ते डॉक्टर विचार. आपल्या मनातील केलेल्या ते लांब पडत नाही किंवा घातक तरु शक्तता.

6. ओषधेचे कमीतकमी बेला घायलीत.

काही ओषधे क्षेत्रातून एकदा घायलीत तर काही 3-4 वेळा घायली लागतात. प्रत्येक ओषधाचा परिणाम शरीरावर वेगळ्याच्या वेगळ्यांत्राने राहतो. डॉक्टरी विहीन लिहितप्रमाणे ल्या त्या प्रमाणाच ओषधे घायलीत.

7. पहिल्या डॉक्टरी दिलेल्या ओषधांच्या मधीली दुसर्या डॉक्टरना सांगणारी गरज नाही.

काही रणनीत्या दुसर्या जास्त घायली असतात. समजा एक डॉक्टर उस्तल्याच मुख्यरूपात तर दुसरी संधिधातातरता ओषधे देतात. अशा ओषधांचे एकमेंकांधर चुन्नारिण ती करणारी शक्तता असतो. तेला आपल्या डॉक्टरना सत्य या पुढील तर असतलेल्या ओषधांची करणात राहे शेवावर. काही रोगांकत आयुक्ताने ओषधे घायली लागतात. त्याची ती काही आपल्या मनाने थंबवायणे घोष वर नाही.

8. सर्व ओषधे जेवणावरोबद्ध म्हणून घायलीत.

काही ओषधे रक्षाका पोटी, काही जेवणच्या तर काही जेवण नारायण, काही पयाब्योब्योब तर काही उपयोग करायला घायली असतात. या बाबतीत डॉक्टरने शुद्ध सांस तत्काल पावले पाहिजे. ओषधांचे काही उपचारण होत आहेत का हे डॉक्टरच तपासाला. नोंदे आहे त्याचे घायला बंद देतात.

9. दौरीकरणचा शालणावा आजाराच्या असलेले डॉक्टरास संस्थान खालील विचाराविशिष्ट आपल्या ओषधे घेत राहेलो नाही.

संस्थानसाठी आजाराची काळांतर आपली शारीरिक स्थिती फायदी देत नाही. वेळाच्या र्थांब्लेस असल्याची तरीही तो आजार त्याच्या सांस घेते राहते पाहिजे. ओषधांचे काही उपचारण होत आहेत का हे डॉक्टरच तपासाला.

10. ओषधे हडहडू बंद

स्टरेड्सइलस सार्व्या ओषधेचे एकदम बंद करू नये हे सावधान आहे. त्यांचे प्रमाण कमी करत आपल्या ती घेणे शेवावर. 11. नेक गोळ्या एकत्र प्रतिलेखा चालनाव

काही दौरीकरण चालणारे रोगांचा निरनिर तर हे काही ओषधे घायली लागतात. त्यांना तुक, घायली पडत वेगळ्या असे असत. या बाबतीत डॉक्टरांनी सुधारगि काहीतरीण पावले पाहिजे. काही ओषधे एकदम एक वेळी घायली त्यांचा परिणाम कमी होऊ शकतो व त्यांचा उपचारण, विशेषतः आतातुक साभार, बांदू शकतो.

12. आयुद्ध, अंतराली, होमियोपाथीची ओषधे एकाहे वेळी घायली हरकत नाही.

‘माई’ - ऑक्टोबर 2003 विशेषांक MAI - October 2003 Special Issue
एक वेलेट एकाच प्रकारी आंध्रेचे येणे हे श्रेष्ठस्वरूप, काही वेलेटा मिरमंडकीच्या सल्ल्याने आणण बाजारात सहज मिळवणारी, व डॉक्टर कोणतोरही मैंने दिलेली, अशी चार्ज प्रकारी आंध्रे घेतील. त्यांचे एकमेकांकर काय, परिणाम होताना याची माहिती आपल्यास नसते. आपली आपणी काही आंध्रे घेत असल्यास त्याची माहिती डॉक्टराना मंगळकेंद्राने दिलेली बरी.

13. ऑलोपेम्बीयी आंध्रे नेहमी दुपरिणाम करतात
प्रस्तेक आंध्रांचे चांगले व वाईट परिणाम असतात. एकदां दुर्धारी शरससर्सरी काही आंध्रे रोग बरा करण्याचा फायदाची असतात, पण ते येताना ती काही दुपरिणामसही मागे घेतात. डॉक्टर नेहमी गुण व दोषांचे भागण बघून आंध्रे देतात. दोष सावधान म्हणून डॉक्टर ऑलोपेम्बीया वेब बदलतात. भरपूर पाणी प्यायला सांगतात. फक्त खायला सांगतात. तसेच अधूर मधून रक्त, लिंधर व फिंडनीच्या तपाससपर्ष्ठ मधून काही वेळा तयार होत असतील ते काही व व्याक इलाज केले जातात. फक्र हुत व फिंडनीच्या विकारात पाणी व तत्सम पेक्षा फार भागणामध्ये घेत येत नाहीत.

14. आशुयेण्ड, होमीओपेम्बीयी आंध्रे दुपरिणाम करत नाहीत.
ही समजूत खरी नाही. या प्रकारी आंध्रे कमी माहींची असल्याने त्यांचे दुपरिणाम लक्कर दिसत नाहीत व रोग बरा होण्यासही खूप वेळ लागतो. काही आंध्रे मंगळकेंद्राच्या दिसतात. उदा, बिल्वा हे एक अनेक गुण असलेले ‘पोर्कपुल’ आंध्र आहे. त्याचे दुपरिणाम सर्वत्र साध्यात. विभवामुळे ऑलोपेम्बीया, ऑसिडेटी, इराज इत्यादी, आणि होळीच्या त्रस्त वीरे अपयात होतात.

15. ऑलोपेम्बीया आंध्रांची अस्त्रकेंद्र येते.
आपला रोग व घातात मांडावली तपासारखी हे आपल्याला अस्त्र करतात, आंध्रे नाही. काही संधिवातार्थी आंध्रे, उदा. मेथोडिस्ट, नूर्मेडिक्स आर्थिकितस्या पेशेवरी प्रतिकारकशी कमी करतात. पण त्यांनी जीवनस्तरात व शौचकों आधार घेतल्यास ही तुट भरणे येते.

आणणी काही सूचना –
1. लहान मुळे व व्यस्कर माणसांना आंध्रे देताना काळजी ध्यानी.
2. ऑलोपेम्बीया बाटलचब्बरवरीची चित्री नीत वाचतात. व्यायाम दिसेला डॉस, तो जास्त घेतला गेल्यास काय करावे त्याचा सूचना असते, ते जास्त ध्येयत.
3. चतुः: डॉक्टर बनुन सर्सरत आंध्रोपचार कर नका. फसल, पडते, वर्षादायीसांग वाचता आपल्यासाठी आपली आंध्रे घेत नका. प्रत्येकाची प्रकृती व आंध्रांचे परिणाम वेगळे असू शकतात.
4. आपल्या रोग व त्याची लक्षणे कुटुंबाची एकूठ व्यक्ती असती, तरी त्यांना दिलेली आंध्रे आपली आपण घेऊ नका. प्रत्येकाची प्रकृती व आंध्रांचे परिणाम वेगळे असू शकतात.
5. ऑलोपेम्बीया बाटलचब्बरवरी अर्थांसे तारीख उत्तराच असल्यास ती आंध्रे वापर नयं. नव.
6. माचा आज्ञारत पूर्ण विशाळांकणी गट असते.
7. आंध्रे व दूर एका चेहू लेण्यासे ऑलोपेम्बीया आंध्रेचे असल्यास आपलचा रोग बरा करून आपणास जोम वेधाक्तकट असतात. पण मानासाधना माहितीले या व्यवस्थाना मान ठेवा, तुरुपसागर करू नका. त्याची नीत माहिती करून घेऊन ती डॉक्टरी सल्ल्यामाणेच व्यया. काही शंका असल्यास डॉक्टरमंडून शंकानिरस्त जरूर करून घ्या. देवेच्या वेळेच्या काळजी ही नंतर होण्याचा नाता पदात्सक अनेक पदात्सक बरी !

- मनोज सरकार

कृपया स्पर्श - ऑक्टोबर 2003 विशेषांक
Making Of a Good Drug

When our doctor prescribes a new medication for our lingering disease, we are awed by the sky high price of that drug. We wonder how a common man can afford to pay for such prescription and why the price of such a tiny pill should be so high.

How many of us give a thought to what goes on behind the screen before such pill arrives in the market? I had a good fortune to be associated with a giant pharmaceutical company in the United States for a number of years as a scientist, and had an opportunity to witness and participate in developing new and novel allopathic drugs. I would like to share with you the gargantuan and mind-boggling effort that is invested in such an endeavour.

These drug houses in U.S.A. generate tremendous profits by marketing drugs and have to pay heavy taxes to the government. If they spend a part of these profits on research & development ( R&D ), the expenses for such efforts are tax deductible. Furthermore, the R&D activities are the basis for development of new drugs and therefore more profits! The major drug companies in U.S.A. spend millions of dollars every year on R&D.

The R&D subsidiary company employees many researchers with different backgrounds. Chemists, biologists, biochemists, pharmacologists, pharmacists, toxicologists, medical doctors, veterinarians, statisticians, computer scientists, etc. work together on various projects. They have access to fully equipped and ultramodern laboratories, animal houses, animal farms and hospital. More emphasis is generally given on common ailments, such as heart diseases, stroke, brain disorders, arthritis, osteoporosis, diabetes, asthma and emphysema, and development of new and novel antibiotics. The maket survey department furnishes information on number of patients suffering from a particular disease and the number of prescriptions written by doctors in USA and all over the world.

The research starts at very basic levels. The chemists synthesize different chemical compounds belonging to various structural categories. The biologists and biochemists make “models” to mimic the disease process in toto or in parts. The disease similar to that in humans is created in small animals. Also, if the pathway of progression of the disease is known, parts of that pathway are reproduced in animals, or in the laboratory at cellular, subcellular or tissue level. The compounds synthesized by the chemists are tested in these different “models” at various doses. If any of them shows significant activity in suppressing the disease or any part of it, the structure of that compound is altered in many ways by chemical reactions and the activity retested, thereby establishing the structure-activity relationship for that series. The compounds showing slightly less activity are reserved as “back up” candidates. A quick study is done on the toxic effects of the most active compound at high doses on rats or mice.

Once a compound is identified as a possible future drug, an application is made to the Federal Drug Agency ( FDA ) for introduction of new drug or IND, citing all the data on activity of that compound in test models. FDA has a major job of watching and scrutinizing every detail of such application. Main aim of the drug companies is to make profits by marketing new drugs, while FDA is highly concerned about guarding the safety and interests of the common man. It is but natural that the drug makers and FDA are at times suspicious and at odds with each other. The drug makers tend to ignore minor side effects of the drug, while sometimes FDA can be too critical in its point of view. Once the IND application is passed, a project team for that compound is formed within the drug company, consisting of scientists with different specialities. From this
The compound is given a serial number and here onwards is known by that number. The information regarding the structure and activity of that compound are kept as closely guarded secrets to avoid any future problems of leaking such vital information to the other drug companies.

At this stage, the active compound is subjected to rigorous and thorough testing in various ways. Short term and long term toxicology studies commence using two small animal species, such as mice, rats, guinea pigs or rabbits and two large animal species, such as dogs, sheep or monkeys. It is observed whether the compound is carcinogenic, i.e. produces cancer of any type, or causes genetic defects in the progeny of small animals. Concurrently, drug metabolism studies are undertaken, i.e. the time required for absorption of the compound from stomach of the animals, the form in which it is carried to the blood, duration to achieve maximum blood levels, the rate of degradation of the compound, analysis of the metabolic products, excretion pathway(s), and whether the compound gets deposited in any tissue and if so, adverse effects of such deposition over time. Simultaneously, the pharmacists make proper formulation of the compound as a liquid, tablet, capsule, aerosol preparation or injectable, so that it is easily absorbed in the body. According to the activity profiles, the compound is formulated in large batches.

Once the project team satisfies itself about the excellent activity and low or negligible toxicity, a "new drug application" (NDA) is made to the FDA. With its approval, the compound turned into potential new drug is administered to a small group of carefully selected patients, under the strict supervision of company doctors. Once these data on humans are approved by FDA, a sizable group of patients is subjected to blind studies. One group of patients is treated with the drug and the other with a similar formulation in appearance, but devoid of drug, i.e. placebo. The doctors in charge and the patients do not have the knowledge of which group is receiving what. If the results show that the drug is effective for the disease, double blind studies are undertaken. The group receiving placebo is treated with the drug and that treated with the drug receives placebo. These are sure fire tests for assessing the real activity of the drug, eliminating all types of psychological barriers in the minds of patients as well as doctors. All the data have to be statistically evaluated and found significant. Any toxicity, not previously seen in animals, but observed in humans cannot be ignored. Blood sera, urine and faeces of patients are analysed frequently. The patients periodically undergo many other test procedures, such as X-rays, sonography, MRIs, etc.

All the data generated on patients, including efficacy, toxicity, metabolism, etc, etc are submitted to the FDA. If everything passes the scrutiny of FDA scientists, multicentre trials commence in U.S.A. and sometimes abroad. The drug is tested on a large number of patients from a variety of population segments in terms of age, sex, race, severity of the disease, etc. The drug and the protocol of treatment, approved by FDA, are provided to these hospitals. Only after obtaining favourable results with patients in these trials the drug enters the market. The accompanying literature must include the chemical structure of the drug, route of administration, dosage, metabolic data and side effects. Clear warnings have to be posted if the drug is carcinogenic or teratogenic at high doses or after long term usage, and deleterious effects, if any, on pregnant women, lactating mothers, infants and children.

In spite of all the pretesting and precautions, unexpected and unacceptable toxic effects of the drug may be reported and it has to be withdrawn from the market. The comparison of efficacy dose and toxicity dose is extremely important in cases of chronic diseases, where patients have to be treated with the drug over a long time period. If the drug is not rapidly metabolised and is deposited in some internal organs for considerable time, this can create problems.

When a new drug with novel mechanism of action is marketed, the drug makers earn tremendous profits. The other companies then follow by making "me too" drugs of similar nature and capture smaller share of the market. Smaller companies, which cannot afford to have such gigantic R & D efforts have to be contended with obtaining license from the parent company to distribute the drug in developing countries under their brand name.

To make a novel drug, it is estimated that after testing about 30 - 40,000 compounds, one compound qualifies for IND status. Out of 50 IND level compounds, one passes for NDA status, and out of 5 - 10 NDA level compounds only one enters the market as a drug.

We all can appreciate that it is almost impossible for the drug houses in India to undertake such gigantic effort to produce new and novel indigenous drugs. Our FDA is not strong enough to be the watch dogs in order to protect the rights and safety of a common man.

From all this discussion it would be clear why we have to import many drugs from abroad and pay hefty sums for our prescriptions.

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‘माई’ - ऑक्टोबर २००३ विशेषांक
BALANCE SHEET OF LIFE

Our Birth is our Opening Balance
Our Death is Our Closing Balance
Our Prejudiced Views are our Liabilities
Our Creative ideas are our Assets
Heart is our Current Asset
Soul is our Fixed Asset
Brain is our Fixed Deposit
Thinking is our Current Account
Achievements are our Capital
Character & Morals, our Stock - In - Trade
Friends are our General Reserves
Values & Behaviour are our Goodwill
Patience is Our Interest Earned
Love is our Dividend
Children are our Bonus Issues
Education is Brands / Patents
Knowledge is our Investment
Experience is our Premium Account
The Aim is to Tally the Balance Sheet Accurately
The Goal is to get the Best Presented Accounts
Award Wishing You Balance Always

Shradha Raja
(Source : Internet Article)
संधिवातास्थी सामना

डॉ. विनया कुंजीर

अस्थी व संधीवा व्याधि सहसा कोणत्या ना कोणत्या प्रकारचे दृष्टी निर्देशन करतात. आपल्यासारख्या शेतीप्रशादन देशातोथे अस्था अपघातामुळे रुग्णांच्या मनावर व कार्यक्षमतेवर खूप परिणाम होतो, परिस्थिती दासकोटे व कुटुंबाच्या अस्तंभ निर्देशन होतो.

कुटुंबातील व समाजातील वैश्विक संबंधातील दुरुपयोग निर्देशन होतो. आणि त्यामुळे रुग्णांचे मानसिक आरोग्य अधिक झालते. आपला परंपरागत भारतीय समाज अशा व्याधिप्रवास रुग्णांच्या प्रश्नांकेत जास्त लक्ष देत नाही. विशेषतः, शिक्षण, ज्या देशातील संधीवात जास्त प्रभावित आहे, अशा अपघातामुळे खूप नाश होतो.

प्रगतीशील देशातील मानसिक शोधन व समजूतीवर आधारित काही निष्कर्ष करण्यात आले आहेत. ते खालील प्रमाणे आहेत.

1. वृद्धच, कौदंबिक प्रक्षेपणे व हवामानाच्या परिणाम संधिवातास्थी होतो.

2. ३६% रुग्णांचा बांट होते की संधिवात होय. हान परिवार जसे रुग्णांकन काळीन उपचार व पद्धतीवर विचार नसलेला. ७०% पेषका जास्त रुग्णांचा ओषधीप्राप्तीसाठी परिणामतील काँगी बांट होती व त्यानी वेगव्या उपचार व पद्धतीचा वापर केला होता.

(मानसिक आवं, जे डॉक्टरांना दिसत नाही."

3. कौदंबिक अस्तंभ, कार्यक्षमतेवर परिणाम, आरोग्य अडचण, रोगांची दौर्गालांकनता व अभिशिषितता, समाजातील ताब्याची. या संधीवा गोष्टी रुग्णांच्या नैराश्याची कारणे आहेत.

4. जवळ जवळ सविचार असे मत होते की डॉक्टर रुग्णांकें महाव्या तरे लक्ष देत नाहीत. डॉक्टरांची नकारात्मक भूमिका, रुग्णांना संधी शेतियासाठी अपूर्ण वेळ व रुग्ण आणि डॉक्टर यांच्यामध्ये निराशाजनक संबंध या गोष्टीमुळे रुग्णांना नैराश्या वाढले.

रुग्णांच्या आरोग्याच्या निराशाजनक समाजातील मानसिक व मानसिक कारणांची परिणाम होतो. ती कारणे मानसिक आवंतील प्रमाणे आहेत.

1. भोजनालयाच्या परिस्थितीतील ताब्याचा संधीवातास्थी - अपघातामुळे रुग्णांची कार्यक्षमता कमी होते, आरोग्य अडचण निर्देशन होते व समाजातील त्यांचे त्यांचे वेपण कमी होते.

2. आंदोलन - संधिवाताचा रुग्ण साहस उदास कसतो व स्वतः असाह्य संपत्ती. त्यामुळे त्यांचा वेदना वाढतो. व असाह्य वेदनेमुळे त्यांचे नैराश्य अधिक वाढतो.

3. असाह्यता किंवा लाचारी - संधिवात हा एक अड़कात कारणाची घोटाव सह संधिवात व अधिक काळ टिकणारा आजार अपघातामुळे याध्विक यात्राचा समज असतो. की आपल्या आजाराच्या नियत्रण देखील येत नाही व
COPING WITH ARTHRITIS

In a developing country like ours where majority of the population is engaged in agriculture or unskilled labour, Rheumatic diseases have a significant impact on the overall morbidity in terms of loss of labour and man-hours. Arthritis affects the ‘psyche’ of an individual more than that seen in chronic diseases like Diabetes or hypertension. The visually obvious handicap & deformities in arthritis cause great suffering to patients. In families, where the earning member is affected, arthritis and its disabilities can cause great disaster and disruption.

Interpersonal relationships in the family and society suffer consequently and contribute to psychiatric problems in patients with chronic arthritis. The orthodox and traditional Indian society does not view the problems of the arthritis patients with kindness or compassion and the suffering is more if the patient is a woman.

From studies based on community concepts and society beliefs the following conclusions can be drawn

1. Ageing, family tendency and climate were considered some factors causing arthritis.

2. 36% of patients believed that arthritis was curable while 30% did not expect any real relief from modern day management. Over 50% patients expressed concerns about the side effects of allopathic drugs used in arthritis and consulted alternative systems of medicine.

3. The causes of major worry to arthritis patients were disruption to family life, loss of man hours in work, financial burden, chronicity of the diseases and its uncertain prognosis and poor social relations.

4. Majority of them were disappointed with the negative attitude of the doctors, inadequate time allocated for consultation and poor doctor patient communication.

Psychosocial factors affecting the patients of Rheumatoid Arthritis

A variety of psychosocial factors may influence the health status of patients with arthritis. Some of them are as

‘माई’ - ऑक्टोबर २००३ विशेषांक

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Psychosocial factors affecting the patients of Rheumatoid Arthritis

A variety of psychosocial factors may influence the health status of patients with arthritis. Some of them are as
1) **Environmental Stress** – Arthritis and related musculoskeletal disorders (ARMD) are frequently associated with multiple stressors including depression and other psychologic disorders, work disability and loss of highly valued social leisure activities.

Patients frequently reported that increase in stress tends to precede flares in disease activity and frequent stresses lead to altered immune function.

2) **Depression** – Depression is common in patients with ARMD. It is seen that depression amplifies pain and also is influenced by pain. Loss of valued activities may be better predictor of depression among patients with arthritis than increase in disability.

3) **Learned Helplessness** – Many patients may develop the belief that their disease is beyond their control because it is of unknown cause, has no cure and is predicted to have a chronic or generally unpredictable causes. This perception of uncontrollability causes anxiety and depression in patients and may lead to increased pain and reduced attempts to adapt themselves to disabilities and distress. Hence improving control over arthritis symptoms is necessary.

4) **Self Efficacy** – The mental suffering in the patients with disabilities leads to loss of their self confidence and consequently changes in their attitude to look at life.

   The coping process comprises of several stages.

   1) Recognizing the threat associated with a particular stressor.
   2) Performing coping strategies that may control the impact of the stressor.
   3) Evaluating the outcomes of there actions and if necessary performing alternative coping response.

   Psychologic adjustment and low levels of pain and function impairment have been associated with strategies focussing on positive thoughts during pain episodes and infrequent use of beliefs that no coping strategy will be effective in controlling symptoms.

**Psychosocial Intervention :-**

1) The sufferings of the patient with disabilities and deformities should be lessened with adequate symptom control and he should be encouraged to a live happy and normal life as much as possible.

   Inspite of the pain, the patient should be encouraged to continue doing his everyday chores and take part in whatever he enjoyed before the disease onset.

2) The people around the patient should ignore the obvious disability and help the patient to adopt a positive outlook in order to avoid the inevitable depression and self pity.

3) The patient should eat balanced meals and exercise regularly, change or add medicines with his doctors approval only. Learn meditation and relaxation techniques. The patients should cultivate a hobby or activity that diverts his attention from the pain and disease.

4) Besides proper and adequate medication, the patient needs close rapport with the doctors. The doctor should help the patient in overcoming the both physical and mental problems. Sometimes despite unsatisfactory therapeutic results the doctors must maintain an optimistic approach & encourage the patient to have a positive attitude.

5) In the developed countries, a Biofeedback Assisted Group therapy is practiced. Trained patients with arthritis help other patients and their family members is relaxation and develop behavioral problems solving skill in them. Sometimes, the trained personnel deliver the coping skills to the patients through telephonic conversation. ‘Mission Arthritis India’ (M.A.I) is a similar organization established in Pune, India. It is a voluntary support group for patients of arthritis and rheumatism; they provide proper and scientific information and guidance about all aspects of arthritis.

It is important to bear in mind some of the psychosocial beliefs of the community while planning the strategies for health education and control and prevention of rheumatic diseases in India.

The community deserves much more attention from the medical profession, which consists of prescription of drug, regular exercise and a good doctor patient communication.

Dr. Vinaya Kunjir

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धिवाताया रूणांना शारीरिक वेदनांना सतत सामोरे जावे लागते. सांगे कितीही ठाट झाले असलेले व स्मार्दळमध्ये कमजोर येत असल्याआधींन द्विनिधन यशहार चालू ठेवून लागतात. स्वस्थ बसून काम भागत नाही. वेकरशामक ओळखी घेऊन तात्पर्य आराम मिळू शकतो. पण संधिखंड हात पूर्णांना हर होण्यातात आजसर नसून काही काढला सांताज्ञानमध्ये बदल होत रहतात, बक्रा येते, अधिकारक ओषधांचा वापर करायचा लगतो. कसीकडीच्या रूणांना स्वतःचाच राज येते, नशीवालांना दुःसती जातात व मनात जीवनावधान नैसर्गिक उपलब्ध होते. अशा वेगी मानसिक बांधून मनुष्य वेदनांवर व काही प्रमाणात रोगावर मात करू शकतो. आ.makedirsीद विचार मनात आणण्याने आपूर्य सुधारे जगण्यासाठी चुकू न मदत होते.

समाजात अशी काही उदाहरण आहेत की ज्वांचा विचार करता मनात असताचे तुऱ्या विचार दुःख वहात व जीवनावधान नव्याचे उभारी निर्माण झाले. माहिती वैटॅन्चे एक मित्र केले. डॉ. अस्मुत शक्ती आपले यांचा कोणतीही वेळ असू शकत होतो. बोलताना शरीरीतील जड जड येते. डॉ. आपले हे एक सुधारादायक शस्त्र व समाजसेवक होते. तत्त्वांतरीणता त्यांनी स्वतंत्रता लक्षित केलेली भाव घेतला होता. नित्यनंतर ते पूर्ण केले समाजकार्यात मात्र असतात. खेळाडूंमधील गरीब , पण होठको मुला-मुलीना शिक्षणांनी सांतींची मिळावी महापूर्ण अशांच्या शिक्षणाची व कभी खचतात ररणाम्या- जेव्हा यांनी स्वतंत्र ररणाम्या त्यांची पूर्णता सुरु केली. पुढे डॉ. आपले यांना वापरत अनेक शारीरिक वार्तारी तड्ड द्वारे लागले. ज्वांचा एक पाय गुडहयातील कामाची लगला होता. असे अपान होऊन ते घरात एका जागी बसून संस्थेचे काम करत करत. लोकांकडून संस्थेचे देवीनी रूपात मदत निभवतर. मला स्वतःला त्या काळात संधिखंडात खुप नास होई. डॉ. अच्छुतांच्या मला अश्वमळून गप्पा मार्गायकर्ता फोन येत. मी निराश नाहीत त्यांतांना मला ते म्हणत, ‘‘अंदाटीले रोगावर आपल्यांचा जाणन नसत तरी खांडायला वर जो माणूस निरोगी असतो तर जगात आणारा राहू शकतो! ते उत्तम काम करतो आहे तोपयेच मुक्तीकार करती करणार?’’ असे वत्स शंभे यांकडे की क्वाल-ला नैसर्गिक उपयुक्त फॅक्टरी बाजू मान शर्ममे खाली जाई ! 

"दुसरे उदाहरण म्हणजे कोल्हापूर शाही नस्तीया हुभुकु यांचे. आयुष्यांच्या पहली १५-१७ वर्ष निरोगी आयुष्य जगलेली ही मुलगी शाळेच्या वार्ताक्रमात नाहीत, असताना स्टेज कोसळून खाली पडवले व तेवर पुनरूपले कोसळखालील शरीरतील संवेदना माहृत बसली. कोव्यम वायत भविष्यत विवरणाचा सुखी स्वप्नांचा सुरुवात झाला. सतत आणाऱ्यास होमिस्टेटलाचा फे-या शरीरी आयुष्या. पण खाली ख्यात धीरजाचा. चांकांचा सुखी बसून तरी आयुष्याचा धीरजपणे समोर गेला. अर्थांनी पुनर्विस्तारात काम करती होते, काही पहला काम नाही, अर्थांनी काम करता येण्याच्या स्वतःला वर्ग वगळण्या प्रकल्प आज या आतीली राहले जाते आहेत. ज्वांचे ‘‘चांकांची खुशी’’ हे पुरूष वाच्यामध्ये नस्तीया दीनी नोलेगाच तात्पर्य जाणून घेतले जात. अर्थांनी चांकांची खुशी काही वैतीने हातात पडवले, मध्यवर्ती सुरुवात मैनीज्म डॉ. स्टीफन हॅकन्ज्म इंटरडूक्शन भारतात आले होते. डाटलेल्हे नाती धीरजाच्या खाली शारीरिक हालचाल करता स्वतत नाही, बोलतातच देखी, ज्वांचा खुसीला जोडण्याला एका वांडण्याच्या नजीक ते पुकं भरत व चंगलावर त्याचे शक्ती तपास भरत. "मता तात्म्यमलाचे भेट देखणे आवश्यक असते" असे ज्वांच्या महानात नस्तीयां तातील विवरणाची कार्याची तपशीलकी दाखवली ! अशा जिथे पुढे नस्तात्मक व्यवस्थेसाठी वाताते.
Rheumatic Patients have to cope with pain, more pain and joint stiffness. Unavoidable daily routine of life has to be continued with the help of pain relieving and antiarthritic drugs. Sometimes, patients are fed up, feel depressed and engage themselves in self pity. It is very important to avoid indulging in negative thoughts. There are many examples around us, where people in worse physical conditions have been able to lead meaningful lives. How do they achieve it? Through intuition, survival instinct, positive attitude and self discipline. It is a "half filled glass" syndrome! One must consider it to be half full rather than half empty.

Dr. Kalindi Phadke
Rheumatoid Arthritis is a systemic disease characterized by remissions and exacerbations which vary in severity and time among people. The chronic nature and often degenerative course causes those treating patients with R.A to follow these guidelines: maintain the patient's physical, psychological and functional abilities for as long as possible through an ongoing carefully planned treatment programme and patient education.

Roles of Physiotherapist and Occupational therapist vary with different stages of the disease. In acute stage, when joints are inflammed, painful, swollen, red and hot, the goals are:

1) Relief of pain by various methods.
   - Don't - use heat in already inflammed joint.
   - Do - Apply ice pack. Interferrential currents are also beneficial as they have strong analgesic effects.

2) Prevention of deformity.
   - Do's - Gentle mobilizing exercises in the limit of pain directed towards recovery of function. Do isometric exercises. Position and support painful joints with the help of pillows, sandbags and splints.
   - Don't - Avoid excessive and forceful movements and also movements in typical pattern of deformity, eg. shoulder adduction and internal rotation.

   - Do's - Active assisted exercises.

   - Don't - Passive stretching of joints.

3) In subacute or chronic stage aim is to improve mobility and strength.

   - Do's - Apply heat in the form of infrared, shortwave diathermy, waxbath or hot packs to reduce pain before starting any exercises. Gentle passive stretching of the contractures is done after the pain subsides. As joint loosens up, mildly resistive exercises are given to improve strength.

   - Don't - No abrupt application of stretch which may rupture the tissue. Excessive resistance is avoided while doing exercises.

4) Patient education about joint protection and energy conservation:

   - Do's - Maintenance of muscle strength and joint range of motion by regular exercise regime provided by therapist.

   - Don't - Avoid positions of deformity and pressures on the joint, e.g. twisting the knees when standing up first and then turning. Avoid strong grasp or pinch, movement of the wrist in ulnar deviation e.g. opening and closing lids, press the cloth than wring it.

   - Do's - Use of proximal body parts in lieu of the more distal ones, e.g. slip a pocket book or shopping bag over a forearm instead of holding in hand.

   - Energy Saving Techniques.

   - Do's - Use light weight energy saving equipments. Plan
ahead to balance rest with exertion, gather all necessary equipment ahead of time, make convenient and sit to mark when possible.

Don't - Avoid unplanned events or work. Do not push beyond your capacity. Also avoid complete bedrest as inactivity can result in weakness, stiffening and loss of mobility. It can also start a cycle of discouragement, depression and further inactivity.

Group therapy to deal with issues of disturbance of self image, body image, job status, family relationships coping mechanism. would be useful.

An "Arthritis Club" run by and for person's with R.A and their families would improve the persons chances of coping successfully with the disease on a long term day to day basis.

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2) Chronic Stage

- जेक्हा सांध्यावर सुज नसते तें ते वेडना कमी करण्यासाठी गरज / Diathermy वापरण्यास हकक्त नाही.
- विकृती (contractures & deformities) टाकण्यासाठी passive प्रमाणाने, सौंभ, यायाम जरूर करावेल.
- तसेच स्नायुविभाग ताकत राखण्यासाठी त्याचे यायाम आवश्यक आहेत.

Energy (शक्ती) वाचवण्यासी काही तंत्र -

- कारण्याचा गोष्टीचे पूर्णनियोजन करा.
- वापरत रेगिस्ती साधने कमी करणाची ठेवा.
- रुग्णाव्या सहनशक्तीप्रवृतीके यायाम, मेहनत टाका, पंढू पूर्ण विश्रांठी टाका, कारण यथामुळे सांध्यांचा लालच्या तसाच राहिल व कार्य क्षमता अजून कमी होईल.
- 'घुप देशी' ने अशा रुग्णाना दिलासा व उजळन भिक्यासंस खूप फायदा होतो.

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‘फिजीओथेरापी आणि सांध्यवत’

Dr. Sunil Shrotriya

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‘माई’ ऑक्टोबर २००३ विशेषांक
Exercise for low back pain

1) Lie on your back with your arms above your knees bent. Now move one knee as far as you can towards your chest and at the same time straighten out the other leg. Go back to the original position with both knees bent and repeat the movements. Switching legs. Relax and repeat the exercise.

2) Lie on your back with your arms at your sides and your knees bent. Now bring your knees up to your chest, and with your hands clasped pull your knees towards your chest. Hold for a count of 10 keeping your knees together and your shoulders flat on the mat. Repeat the pulling and holding movement 3 times. Relax and repeat the exercise.

3) Relax with your arms above your head and knees bent. Now tighten the muscles of your lower abdomen and your buttocks at the same time so as to flatten your back against the mat. This is the flat back position. Hold the position for a count of 10. Relax and repeat the exercise.

1) Lie on your back with your arms above your knees bent. Now move one knee as far as you can towards your chest and at the same time straighten out the other leg. Go back to the original position with both knees bent and repeat the movements. Switching legs. Relax and repeat the exercise.

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4) One leg straight, other bent, hold the knee with one hand and pull the leg towards the chest. Hold for 10 seconds and repeat with the other leg.
4) Sit on a hard chair. Let your body drop until your head is down between your knees. Pull your body back up into a sitting position while tightening your abdominal muscles. Relax and repeat the exercise.

5) Stand erect while holding onto a table or chair. Squat down, straighten up again, relax and repeat the exercise.

Knee Exercise

1) Lie flat with injured leg straight. Keep good leg bent to protect lower back. Slowly raise injured leg about 24" off floor, always keeping leg as straight as you can. Hold position for 5 seconds, then let leg down slowly. Rest for 5 seconds, then repeat.

2) Lie down with injured knee flat and straight. Tighten front thigh muscle (Quadriceps) by trying to push back of knee to floor. Making legs as stiff as possible. Hold for 5 seconds, relax muscles for 5 seconds, then repeat.

3) To strengthen back thigh muscles (Hamstring), press down with heels instead of knee.

4) Lie on stomach with both legs straight. Bend injured knee back to make right angle (or as much as you can) Hold for 3 seconds, then let foot down slowly. Rest for 2 seconds, then repeat.

Tip: Do 1-2 sets of 10-15 repetitions each day, over a period of 3-4 weeks. Follow my advice and you will be able to resume normal activities soon.
संसाधारण जनतेमध्ये हहशीकार, रक्तदाव, मधुमेह या बड्लेची जागरूकता आढळून येते. परंतु हार्दिक्या व्याधिदल विशेषकरण अर्थात डिस्युलतसिया या बडल्याच्या जागरूकतेची उपीव हिस्सून येते. बांधत्या व्याधिमानाच्या केस व्याधिमानांना पहिलांत, व्याधिमानांने आपली हाते हिस्सून होतात. हार्दिक्या या अवस्थेला ‘ऑस्टीओपोरोसिस’ असे म्हणतात. साधारण व्याच्या वैचित्र्याच्या अथवा पाचा दशकात हार्दिक्या श्रीज व बढकेगी याच्यात रुकवत होऊ लागते. स्थितिमध्ये विशेषकरण ही श्रीज जाह्न्य रुकते व ती लाख टक्करांपासून पोहोचते.

मानातील शरीराचा अस्थिबाह्य व महामाया अशा व अस्थी व साम्यंत्रिक आणि थरांबद्ध जनतेत हार्दिक्या निर्माण करत ते आहार परिणामणीकरण करते दाखल येतील हा म्हणून हे गृहस्थी रचना व दशकात एका विशेषील गटाची स्थापना उल्लिख्यात आहे. याचाच एक कृती कार्यक्रम म्हणून 20 अक्टोबर विवाह जगभर ‘ऑस्टीओपोरोसिस डिस’ म्हणून साजरा केला जात आहे.

अस्थीचे आरोग्य - जोपासना व वृद्धी
केंद्रशासित व फॉक्स्फोस्स ही मूलद्रव्य आणि बाह्यतर शरीराचा आहाररूप दृष्टित जातात. दृष्टि, अंडी, फॉक्स्फोस्स या महामया व शरीरावैचित्र्याच्या गरज भावाच्यात जाते. केंद्रशासित व फॉक्स्फोस्स यांचे संतुलन ‘पेयार्नॉमन्य’ या वैधिकस्वरूप सांख्यिक रूपांतरण करते. मूलद्रव्यांची अतिशय प्रभावी असे स्थितिमिन D3 तयार होते. या स्थितिमिन D3 द्वारे केंद्रशासित आहाररूपात व हार्दिक्या सामान्य भोजनात आहे. त्याच्या जवळपास खालील मुद्द्यांना अंतिम लागते.

1) नियमित बैठे व्यायाम,
2) बालनयचा व्यायाम,
3) संतुलत आहार,
4) आहारात दृष्टि व दुर्योग वायरसशास्त्र वापर,
5) पाल्याच्याचे नियमित सेवन,
6) मूलद्रव्य येतनाचा काळ हार्दिक्या वाढीत दाखल गेलेले असतो. त्याच्या वागतील मूलद्रव्यांचा काळ तर पिचुक, अंडी, फॉक्स्फोस्स या महामया व शरीराच्या गरज भावाच्यात जाते.
आरोपियाही शाब्दिक राहिलः

7) गर्भवती व तत्त्वतः करणाचा मातांकी विशेषता: केल्सियममय प्रमाण जास्त असते ते भोजन (1500 मिली ग्राम) निरूपिताने सेवन करते,
8) जोनिमवृक्ष किंवा मेन्पोज या काव्यात इस्ट्रोजनचा अभाव असल्यामुळे हाते पालते व विसू महत्त्व प्राप्त होतात. या काव्यात केल्सियम व विटामिन्चे ‘‘डी’’ सेवन वाढेवाढीची गरज असते,
9) बुधानांना सार वर्षानुसार निर्माणितवर्त्या १०० ते १२० मिलियन केल्सियम ढावे.

कार करणे नये -
1) भूमपान टाकवे;
2) मधुपान करणे;
3) जेवणातील ‘फाइब्रिल’ आवडी निवडवी ठेवू नयेत.

हाझडांचा दिसूल्मणा म्हणजे काय?
हाझडांच जडणधडण व झीज ही आहोत चाचू, असते. हे होत असताना केल्सियम, फाउस्टिनस व काही होमोस्ट्रस यांचे संतुलन राहणे आवश्यक असते. हा तराजू जर कठिनाची बाजूला जास्त झुकला तरी हात तयार होणाऱ्या प्रक्रिया मंदवते व हाझडांची झीज मात्र तलीच चाचू राहते. ल्यामुळे नवीन तयार होणारे हात हे कमजोर व कमी दराचे तयार होते. परिशिष्टी असे हे अशा हात शरीराच्या पद्धती थांबली तागतानाव सह मुळा शकत नाही. ठोळवाश्या दुखापतीने, पाय घसरलू पद्धत्याने हात मोड्याच्या शक्यता वाढते. एका का अस्थिमंहट (फॅक्टर) झाला की, ल्यामुळे निमित्त होणाऱ्या वेदना, औषधीपतालाचा आर्थिक व वातावरण किंवा कामचे परवर्ती जीवन हा गोदी अनाहून्यांचे येतात. ठोळवाश्या हाझडांचा दिसूल्मणा (ऑस्ट्रोपोरोसिस) हा अस्थिमंहट होणाऱ्या महत्त्वाचे करणे आहे.

हाझडांचा दिसूल्मणा - तिघे
हात दुखू, नायू दुखू, विकर्षित वाचू, हात व पाय वखं, हातपाय दुखू, करू दुखू, सहायताज्ञी अस्थिमंहट होणे

अस्थिमंहट - वैशिष्ट्यधापूर्ण जागा
हाझडांचा दिसूल्मणुमुळे हा मोड्याच्या जागा तराविक असतात. समासा तेथे बजानाचा गम अधिक असतो. किवा वाढू व हात वांगातील ‘किन’ यांचे प्रमाण ठीक नसते तेव्हा हात मोड्याची शक्यता जास्त असते. रेइयस व अल्प ही हातातील मनगटजवळील हाते, मांडीव्या हालीकास साधा (हिम जॉकेट) तुलने, मांडीच्या हाडाच्या (कीमर) गवलाजवळी अस्थिमंहट, पाळीच्या मण्याच्या अस्थिमंहट, फासव्यांचा अस्थिमंहट वाचे.

अस्थिमंहट - विषयक वयोग - कारण मिलाता
1) लहान मुळे -
या काव्यात हाझडांची बाध ते होत असते. ही हात सहजपणे वाकतात. विशेषकर मुळांचा (रकेट्स) असलेल्या मुळांमध्ये हात मोडून जात अपमाणत आढळते.
2) जोनिमवृक्ष (मेन्पोज) काळ -
या अस्थिमंहट वेवीकजोकपाली तो एस्ट्रोजनचा पुरुषा यथार्थ प्रमाणत होत नाही. अस्थिमंहट हाझडाच्या पेशी (ऑस्ट्रीओलास्ट) काम मंदतो, अस्थिमंहटन करणार्या पेशी (ऑस्ट्रीओलास्ट) यांचे काम बदवते व हात पोकक होते.
3) जोनिमवृक्ष (मेन्पोज) नंतर काळ -
या उल्लेख केल्सियम आणि हाझडाच्या पेशीचे अद्वैत नाते आहे. ह्या तात्त्विक दुरात्मक होणारे झाला की हात दिसूल्मण वाढते. हाझडांमध्ये वेदना होऊ लागतात.
4) वृद्धावस्था -
5) वृद्धावस्थेत सर्वांसारिक क्रिया मंदवतात, त्याच अनुप्रयोगात हाझडाची अनिष्ठी मंदतात,
6) पदवरटे दाट व कमी झालेली भूक यामुळे केल्सियमचा पुरवठा कमी होतो,
7) कमी झालेली ग्रूप, न सावनाचा येणारा तोल, पारंपरिकसोनिम्स (मक्याण्ड) सार्थेआजऱ्या, यामुळे बुढे नेमिं व्यायाम सरायव आतापर्यंत सहजपणे पदवरट व त्याचा अस्थिमंहट होऊ शकतो.

या व्याकरणपती पुढील आजारतंत्रमध्ये हाझडांचा दिसूल्मण प्रमुखवाने आढळतो -
1) यकृताचे आजार - यकृताच्या कर्कने अथवा सिन्हासिस,
2) घटांगडी (धायरैड) चे आजार
3) मधुमेहाचे रुग्ण
4) दीपकीतीन मृत्युपित आजार
5) कर्कनोगाने गुप्त रुग्ण
6) फेनिटाउइन, हिपोरिऩ ही ओष्ठचे घेणारे रुग्ण
हादांचा दिसूनुपणा - काही महत्वाची कारणे

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रिखया व दिसूनु हादे – एक नाते कारण निमित्ता –

1) असंतुलित आहार -
आपल्या देशात सिया स्वस्थ-व्या खाण्यासाठीपव्या अधिवार कारणी घेत नाहीत. ज्यास, ते आहारात योग्यता संतुलन राहत नाही.

2) गोरेदरणा -
अनेक अपलो असलेल्या सियांमध्ये हादांचा दिसूनुपणा जास्तपणे दिसतो. प्रथेय गोरेदरणत रिखया व्या हादांची झीर होत आसते. जन्माला गोरेदरणणात आईकूलान कॅंथियमचा पुरवठा होत असतो. गोरेदरणणी कॅंथियमची रेजीन गरजी वाहलेली असते. थेड्सक्यात आईकूलान कॅंथियम सांपेकावर माणी वाहले आहेत आणि हादांची झीर होते, आईकूलान कॅंथियमचा सांत्र कमी होते. निर्माणशास्त्र मुंबुमार नवारक्षस आईकूलान अंगारा सर्वसाधारण जोपासले जाते आणि त्यांमध्ये आईकूलान वावर-वाही न केवळ रिखया वार्तक्यात ते धातक ठर शकते.

3) स्तन्धायन -
अनेका आईकूलान दुःखनुत अधकारे पोषण होते व त्याचे कॅंथियमादि भििते. पुरुष आईकूलान शरीरातील हा कॅंथियमचा सांत्र पूर्ववाच्यावर आणणासाठी आईकूलान कॅंथियमचे सेवन योग्य प्रामाण्यता घेणे महत्वाचे ठरते.

4) अनर्थसंक्षेप कारणांमध्ये पाळी बंड होणे -
ब्राह्म सियांमध्ये पाळीचा त्रास अथवा इतर गंभीर कारणांमध्ये शीर्षीजकोष काढले जाते. त्यामुळे हादांचा वाढीसाठी पुरुष असलेले एस्ट्रोजेन तयार होत नाही. हादे कमजोर होततात व अस्थिमार्ग होणारे प्रामाण्य वाढते.

5) व्यायामिक अनेक -
सर्वसाधारणपणे सियांमध्ये व्यायामबाबत अनास्था दिसते. घरातील नेहीनीच्या कमतील धावपान, ओडासण, योग व व्यायाम समजतात. व्यायाम हा जाणीवपूर्वक, हेतुपूर्वक करण्याचा प्रयत्न असतो. त्यामुळे स्वास्थ्य बँकट होततात व गुडीचे ‘हादे आहें’ सुदुर राहते. महिला मंडळे, सामाजिक संस्था, विविध मंडळे यातून खास महिलासाठी व्यायामर्ग चालवणे जास्त इत्यादी.

6) व्यवसाय -
आज सिया पुरुषांच्याॅलीच्या काम करत आहेत. व्यवसायात गुंडलेल्या सिया एकाच जागेचे वसून काम करत व त्यामुळे अभ्येंत होती. याकाळी काही सिया धरणूस अभ्येंत करतर हे वॅर्सेर त्यांना सुरूकि पाण्यापूर्वक लवचेंडच्या निर्माण होणारे ह्यूमेंडन ‘डी’ सहजपणे मिळते. त्यामुळे अशा काही सहजलांबी हादांचा दिसूनुपणा कमी


Osteoporosis

1) It is reduction in bone mass / density or presence of Fragility fracture characterised by deterioration in architecture of selection leading to increased risk of fractures.

2) The bone density remodeling is dependent on several factors like vitamin D, calcium & hormones, like Estrogen, Androgen, Parathormone etc & osteoporosis results from imbalance between bone resorption & formation.

3) Risk factor for Osteoporosis are-
   A. Deficiency of Vit D / Calcium/ Oestrogen/ Androgens.
   B. Smoking / Alcohol.
   C. Inadequate exposure to sunlight.
   D. Genetic factors.
   E. Immobilisation.
   F. Chronic use of certain drugs, steroids.

4) The spectrum of severity can vary from asymptomatic state to fracture of vertebrate / femur with its complications.

5) The treatment of osteoporosis includes:
   A. Management of fractures.
   B. Suplementation of Vit D / Calcium.
   C. Pharmacologic therapy, Estrogen, Bisphosphonates

6) Modification of risk factors - at least extrinsic / modifiable factors is in our hands -
   A. Balanced diet with calcium / Vit D supplement.
   B. Exposure to sunlight.
   C. Avoidance of smoking.
   D. Regular exercises.

Thus Osteoporosis is preventable, as well as treatable, but as they say Prevention is always better than cure. Isn’t it true for “Healthy bones”?

- Dr. Lata Bichile

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Osteoporosis

1) आहुजो. शहरातील सूर्यकिंचित्तु आपण आपल्यावर्त प्राथमिक धातु हाती व धातुकरण नैसर्गिक किंवा मंदवात धातुनुसार असेल तेव्हा सूर्यकिंचित्तु फायदा घेणे महत्त्वाचे.

2) धातुच्या काळीची गरज असत्यास, न घसरणारी तीनपाही काळी वापरात वेळे, काळीची उंची व वजन पडतालून पहाणे, धातुमुळे त्याना जास्त न बाक्य सहजपणे बाळता येईल.

3) पिरस्थलीकरण जाताना त्याना सोबत करणे

4) स्त्रियाचा धातु मेंढावळात लाइट चालू तेव्हे, त्याच्या नेहमीच्या चालणीच्या स्थायीत अवघडऱे दूर करणे.

हांताचा हिंसूणणा - प्रतिनिधित्व उपचार पद्धती -

1) ह्या कंडिशनच्या पूर्णता येईल हृदयस्तंभ मेंढावळात, धातुसत्कारक गोल्धयेका हाकांपासून असेल त्याला उपस्थितीला आलेली करणे अवश्यक ठरते. या धातुच्या आवंचनाचे इलेवा चालू करता येते. पुढील तीनप्रणाली वापरला जाताना.

कॅल्शियम

पद्धती 9200 ते 15000 टीव्हीम मॅस्लियम घेणे जरूरी आहे. गर्दर शिक्षा, स्तनपान करणारा शिक्षा रूपांतरण धातुच्या चालणीच्या परिणामाचा कॅल्शियम द्वारे.

-whitening 2

400 ते 800 युनीट विद्युत व्हायेंट टी. अशा शिक्षी नाही. विसारांसेज हास्ताथ्याची श्रेणी रोखण्यास मदत करतात व ती आमळातून एकदा पेलेली जातात.

कॅल्सिस्टिनीन / Parathormone (Parathormone)

हे ओशोवाच लाखापासून रोखण्यास मदत करतात अशे हे नैसर्गिक ओपासणो खर्चिक करणे साध्य तरी त्याची उपयुक्तता मयादित आहे.

एच.आर.टी. (हास्ताथ्याचे रिप्लेसमेंट थेपी)

हे रोगमत्रूकी नंतर घेता येते, परंतु ते तुम्ही करणारा आवश्यकता लपवणारे करणे अवश्यक आहे.

टीप - ही ओपासणा डिटेक्टत रूपे प्रकिरणी व्हायेंटले. ती फार ह्या ह्या परिणामाच्या आवश्यकता ठरते. त्यामुळे ह्या वीर्याच्या चालणी लागतात. ही ओपासणे सुरु करणारा आवश्यक, तेव्हा ती ओपासणे दीर्घ काळ मेंढावळात अर्थव्यापी घमाचा मोजून घेणे अवश्यक आहे.

महत्त्वाचे ठोकूने -

- हार्ट सोबाज, अस्थिभंग टाका.
- हार्ट दिसून होण्याची प्रक्रिया काबू ठेवता येते.
- हेसूल हार्ट मजबूत करता येतात.
- हेसूल हार्दिक महाराणे होणारे अस्थिभंग टाकता येतात.

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Dr. Lata Bichile
These are frequently found chronic illnesses that have many features in common.

1) All are chronic, lifelong illnesses with multifactorial aetiopathogenesis – with genetic background as well as environmental factors involved in pathogenesis.

2) The diseases are multisystemic – having impact on many systems of body, skin, eye, kidneys, lungs, nerves, heart etc.

3) They are all aggressive & are progressive in nature. If uncontrolled & aggressive, can lead to life threatening complications, increase in morbidity as well as mortality.

4) They are not curable but definitely controlled with proper medications & lifestyle modification.

5) Thus, they are to be detected / diagnosed as early as possible & treated as aggressively as one can. They have to be regularly followed up under expert guidance.

6) There are certain circumstances where these diseases can co-exist & drugs do have some interactions, e.g. prolonged treatment with high dose of steroids for arthritis may lead to development of diabetes / hypertension.

7) Diabetes itself can give rise to arthropathy and decrease joint mobility.

Now let us consider a few things regarding these illnesses their management & prevention.

**Diabetes**

It results from either insulin deficiency and / or insulin resistance. Accordingly, there are 2 main subgroups of diabetes:-

- Type I – Insulin dependent
- Type II – Non – Insulin dependent

The clinical features as well as management differ in these groups.

How to diagnose diabetes?

**Some of the clinical features**

1. Recent weight gain / loss
2. Polyphagia
3. Polydypsia
4. Polyuria
5. Recurrent infections, like urinary tract infections

**Laboratory Criteria.**

1. Fasting plasma glucose ≥ 126 mg / dl
2. (2hr) Post prandial glucose ≥ 200 mg / dl
3. Random blood glucose > 200 mg / dl

on 2 random occasions.

Multisystem complications of diabetes are –

- Nephropathy (Kidneys)
- Vasculopathy (Blood Vessels)
- Neuropathy (Nervous System)
- Retinopathy ( Retina of Eye)
- Cardiomyopathy (Heart Muscle)
Control of diabetes

It involves non-pharmacological as well as pharmacological measures. Non-pharmacological measures play important role.

A) Diet :-
- Calorie intake & actual requirement of calories is to be calculated for every patient.
- No fasting / feasting.
- Frequent, small meals are better.
- Cut down sweets, refined sugar, excess tea/coffee, saturated fats / oils.

B) Exercise: -
- Regular daily exercise – at least 30 min walk.
- Type & timing of exercise according to patient’s convenience.
- No exercise in fasting state or after a full meal.
- No vigorous exercise without expert opinion.

C) Stress Management
Yoga, meditation and other relaxation techniques better for stress management.

D) Drugs –
i) For glycemic control.
1) Oral hypoglycemic agents – Increase insulin secretion and improve sensitivity of insulin receptors.
2) Insulin – Dose, time, type and strength should be confirmed by experts.
   - To be taken strictly under supervision.
   - No missing of meals / drugs.
   - No long acting hypoglycemic agents in elderly patients.
   - Learn proper technique of injections & dose.
   - Doses of drugs not to be changed without expert’s opinion.

ii) For associated problems like hypertension and dyslipidemia -
Antihypertensives and lipid lowering agents.

E) Monitoring of diabetes
1. Regular blood glucose profile – Fasting and Postprandial measurements are to be done 2 monthly in well controlled diabetes, or as & when required.
2. Other periodic investigation are needed to rule out complications
   i. Urine examination for proteinuria also should be done, in addition.
   ii. Renal Functional tests.
   iii. Lipid Profile.
   iv. Eye checkup.
   v. Neurological examination.
   vi. Special care is to be given to feet, nails, eyes.

Hypertension –
It is a condition in which there is elevation of blood pressure in peripheral arteries. Readings are mentioned as systolic pressure that indicates contractility of heart and diastolic pressure indicates tone / resistance of peripheral vessels. The blood pressure of an individual varies with time. Factors like age, posture, sympathetic nervous system activity, etc. affect the blood pressure from time to time.

Average blood pressure for adults (18 years or older) 120/80 mm Hg is taken as normal blood pressure, 2 or more diastolic BP reading > 90mm Hg on at least 2 subsequent visits is taken as diastolic hypertension.

At one end hypertension can remain asymptomatic, however, it can give rise to fatal sequelae like acute left ventricular failure or renal shut down. Hence it needs to be detected early & treated aggressively.

Risk factors for hypertension –

i. Male sex
ii. Family history
iii. Smoking
iv. Hyperlipidemia
v. Diabetes

Target organ damage can manifest as
- Left ventricular hypertrophy
- Angina, Myocardial infarction
- Stroke, (hemiparesis / hemiplegia)
- Peripheral vascular disease
Renal impairment

Treatment of hypertension aims at

diastolic BP < 90 mm Hg.
systolic BP < 160 mm Hg.

Nonpharmacological Measures:

To be continued lifetime along with definitive treatment.

- Reduce / control of weight if obese.
- Reduce dietary fat/saturated oils.
- Reduce salt intake.
- Stop smoking.
- Limit / stop alcohol intake.
- Regular exercises.
- Stress relaxation - yoga.

Drugs –

Many anti hypertensives are available for the treatment
in the market, but choice of drug depends on many factors
like age, renal status associated conditions like diabetes
etc. Hence, proper selection of proper drug is most
important.

- Drugs to be taken regularly, at fixed timings, if
  possible.
- No missing of drugs.
- No changes of drug doses / drug, unless consulted
  with the experts.

References:
(1) Principles of Internal Medicine - Harrison Vol 1 & 2, 15th
ed. (2) API Text book of Medicine - by Siddharth Das.

JOKE

An Indian peasant on his first flight to take up a job in England got a seat on British airline. Came
lunch time and the stewardess brought a tray of European savories. “No”, said the peasant firmly as he
undid a small bundle and took out a makke ki roti. “What is this you are munching?” asked the
stewardess. “This bread India,” he replied. A little while later, the stewardess brought a trayful of puddings
of different kinds. Once again the peasant shook his head, as he produced a lump of gur from his pocket
and put it in his mouth. “What is this you are chewing?” asked the stewardess. “This sweet India,” he
replied.

When the stewardess came to take away the lunch trays, the peasant let out a loud belch. “And what
is this?” demanded the stewardess sternly. “This is Air India.”

Dr. Vaipatari Ladoo - JOSHI

References:
(1) Principles of Internal Medicine - Harrison Vol 1 & 2, 15th
ed. (2) API Text book of Medicine - by Siddharth Das.
Many patients diagnosed with osteoarthritis are overweight and may become overweight as a result of their decreased mobility and/or an inappropriate dietary intake. Weight reduction is an important measure to minimize stress on the joints, to reduce pain and maintain or improve mobility.

Osteoarthritis has no specific dietary indications but lack of mobility may hamper physical activity and increase boredom eating. Incidence of the weight bearing joints is higher in obese than in lean persons and this condition worsens with higher weight. For patients with OA weight reduction seems to improve joints.

Overweight is defined as a body mass index (BMI) of 25 to 29.9 and obesity is defined as BMI greater than 30 (NIH, 1998). Body mass index is ratio of weight in Kg to square of height in meters. Following table gives us classification of overweight and obesity, based on BMI.

<table>
<thead>
<tr>
<th>BMI (Body Mass Index)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24.9 Kg/m²</td>
<td>Normal</td>
</tr>
<tr>
<td>25-29.9 Kg/m²</td>
<td>Overweight</td>
</tr>
<tr>
<td>30-40 Kg/m²</td>
<td>Obese</td>
</tr>
<tr>
<td>&gt;40 Kg/m²</td>
<td>Severely obese</td>
</tr>
</tbody>
</table>

Imbalance in energy input leads to accumulation of fats. Excess energy consumed relative to individual's energy requirements leads to putting on weight. Complex interactions of factors like excess intake of food, lack of energy expenditure and heredity result in overweight and obesity.

**Dietetic management of Obesity**

Necessary changes in eating and physical activity together can bring in weight reduction. Calories restriction by giving moderate energy deficit or low calorie diet and increase in physical activity can mobilize the fat stores. Diet should contain variety of patterns like low fat, high carbohydrates to complex carbohydrates and saturated fats to unsaturated fats can bring in the desired effect. Complex CHO are less fattening, because they are much less easily converted to body fat.

Dietary regimens such as low-calorie diet (LCD) with total calorie intake of average 800-1200 kcal/day or very low-calorie diet (VLCD) < 800 kcal/day, also called protein diet could be used under proper medical supervision by moderately or severely obese individuals.

**Diet in Osteoarthritis**

A well balanced diet that promotes maintenance of desirable body weight is an important medical nutrition therapy for arthrits.

Intake of calcium and Vit D should be optimum. High intake of antioxidants, especially Vit C, has shown to be reducing the risk of progression of arthritis. Dietary supplements and complementary therapies have gained popularity as cartilage regenerating and avoiding degeneration. However, there is no scientific basis for their benefits. Supplementation of Glucosamine and Chondroitin...
Dietary management in RA

Patients with RA are at risk of poor nutritional status. There are no specific indications for diet in RA. Nutrition related problems in RA are anemia and weight gain as a side effect of steroid therapy. Dietary manipulations of type of fats may be beneficial. Epidemiological studies have shown that Omega-3 fatty acids may help prevent rheumatic arthritis. Omega-3 fatty acids are found to be down regulating production of proinflammatory cytokines and modulate the effects of their inflammatory mediators such as eicosanoids. Altering dietary polyunsaturated fatty acids (PUFA) composition in favour of increased levels of Omega-3 fatty acids could therefore beneficially reduce or modulate inflammatory process and thus reduce symptoms. Diets with supplemental doses of Omega-3 such as flax oil or almond oil have shown to be effective in improving in arthritic conditions and modulation of inflammatory response.

Alternative and complementary dietary therapies

Strict vegetarian diets have been reported by patients to improve symptoms. Total fasting has been shown to result in symptom relief, possibly as a result of reduced production of the chemical mediators of inflammation, but such a practice is also likely to have detrimental effects on nutritional status and can not be recommended.

Ayurved, traditional Indian system of medicine, looks at arthritis as 'vata vyadhi' and recommends diets that reduce 'ama' by avoiding fermented foods like idli, bread, curd etc. Snehana, agnee deepana, ama pachana are other lines of treatments suggested by Ayurved.

References


 sulphate are advocated for providing building blocks for cartilage regeneration and are reported to give symptomatic relief. Products such as vinegar, honey, algal extras and supplements of vitamins C, E, pantothenic acid, selenium and zinc are commonly tried.

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References


BMI (Body Mass Index) is a measure of body fat based on height and weight that applies to adult men and women. It is calculated as weight in kilograms divided by height in meters squared. Obesity is defined as a BMI greater than or equal to 30.0. It is estimated that over 12% of the United States population is obese. Obesity is associated with an increased risk of developing heart disease, stroke, and certain types of cancer. It is also associated with an increased risk of premature death. Theobromine, a compound found in chocolate, is another dietary component that may be beneficial in reducing inflammation. Theobromine is thought to have anti-inflammatory properties and may help to reduce the symptoms of RA.

Alternative and complementary dietary therapies

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References

कॉप्कोर्ड (Community Oriented Prevention of Rheumatic Disease - COPCORD) या उपक्रमात्मक सुरुवात 1981 साल में जागरूकता आरोग्य संघटना (World Health Organisation - WHO) व जिल्हावाद निदेशक संघटना (International League against Rheumatism - ILAR) द्वारा एकक्रियतण के लिए आयोजित की गई थी।

प्रारंभिक देशातील ग्रामीण भागातील अस्थि व संबंधित व्याधियों के मार्गण में अधिकता व विद्याप्रेरणा तथा उपचार व संबंधित धोकाधारों के कमाने के लिए उपक्रमात्मक सुरुवात की।

कॉप्कोर्ड कार्यक्रम सुरुवातिला गावातील 29 सुनिश्चित तत्त्व व महिलांना पुढे 2 दिवस प्रशिक्षण देतात. या स्वस्थ्यसेवकांनी घरातील जातीयंग व्यक्तिवर व्यक्तिवाद आजारावरण माहिती देतातील. पश्चिम 6034 लोकांची माहिती प्राप्त आली, त्या 1996 मध्ये 175,500 लोकांना कोणत्या ना कोणत्या प्रकारच्या अस्थि, संबंधित आजार असल्याचे दिसून आले. या 27 जनवरी आर्थिक (Rheumatoid Arthritis) 237 जनाना (Osteoarthritis) 224 जनाना (Soft Tissue Rheumatism) व 35 जनाना (Inflammatory Arthritis-Unclassifiable)

प्रशिक्षणाची आवश्यकता असल्याचे आढळून आले. 1999 मध्ये पुढे एक पहाडी कर्मियांना आलेले. व देशातील रूस तपासणी, शिकारी, औषधीपर्यायात्मक संबंधित विषयात इ. इनेंट्रा मोफेट देशात आलंग.

एन. जयस्थ्री पाटील

असल्याच्या आवश्यकता असल्याचे आढळून आले.
Bhigwan Copcord - A revolution to control rheumatic disease

WHO & ILAR launched a special programme for Rheumatic disease called Community Oriented Programme for Control of Rhumatic Diseases (COPCORD) in 1981. Dr. Chopra started India’s first and world’s 7th COPCORD Bhigwan programme in 1996. Its main aim is to study the rural prevalence of rheumatic-musculoskeletal symptoms / disease (RMSD).

It began with survey of 6034 population in village Bhigwan.

Follow up visits by Dr. Chopra & his medical team are made on 3rd Saturday of every month. Patients from neighbouring villages as well as cities like Kolhapur, Satara, Karad, Mumbai, also travel to seek medical advice.

All services including investigation, diagnosis, and therapy guidance till date are given free of cost.

CME sessions were held for local medical practitioners. Distribution of free health education booklets in marathi for the village people was done.

COPCORD Bhigwan has improved the quality of life of the patients and this is the main success of this programme.

Many national and international experts like Dr. Khaltev Co-ordinator WHO, Dr. Jan Decker, President of ILAR, have visited Bhigwan.

WHO has announced COPCORD Bhigwan as a model for other copcord programmes in the world.

RA-Rheumatoid Arthritis, STR-Soft Tissue Rheumatism, OA-Osteoarthrits, AS-Ankyosing Spondylitis, IA-A-Inflammatory Arthritis - Unclassifiable, SRD-Symptom Related Disease

Dr. Jayashree Patil

RA 3%
STR 29%
SRD 31%
OA 30%
AS 1%
IA-U 5%
Gout 1%
**Introduction:**

The world health organization has declared 20th October as “World trauma day”. The very fact behind this is every 30 seconds someone dies from an accident on the World’s roads. Every year 23-24 million people worldwide are injured in road traffic accidents & these are the leading cause of death & hospital admissions for people under age 40. The situation in India is worsening and road crash fatalities & casualties have been increasing over the past 20 years.

**Road Traffic Accidents in India:** Few Observations

- Around 15% of total road traffic fatalities in India occur in 23 metros.
- In metros, MTW (Motorised Two Wheelers) comprise approx. 70% of all vehicles & constitute 20 – 30% of fatalities.
- Heavy vehicles like trucks & buses are associated 50 – 70% of fatal road crashes both in urban & rural areas. [Non motorized transport constitutes a significant share of the total traffic in Indian cities]
- Buses & trucks are involved in higher proportion in fatal crashes with pedestrians & bicyclists than in non-fatal crashes. Motorised two wheelers & cars have a higher involvement in non-fatal crashes than in fatal crashes which is true for urban as well as rural area.
- The NMT road users consisting of pedestrians, cyclists & other slow moving vehicles are the most vulnerable group & account for 60 – 80% of the fatalities.
- Between 8pm at night & 4am in the morning, crash rates are high compared to the density of the traffic. This may be due to prevalence of higher vehicle speeds, low visibility, low conspicuity of vehicles & alcohol.
- There is increase in number of vehicles on the road.
- The same road space gets used by modern cars & buses along with locally developed vehicles for public transport, scooters & motorcycles, bicycles, tricycle rickshaws and animal & human drawn carts.
- Four lane divided highways in India do not have parallel road links for slow & non motorized traffic & there are no standards for providing services needed by NMT.
  1. The issue concerning safety of NMT have not been given adequate importance. Policies need to be developed so that these groups are included as an integral part of traffic in the planning of new highway & area planning schemes.
  2. Inadequate work is being done to analyze the characteristics of road traffic crashes involving NMT users so as to understand & design suitable counter measures.

For those types of crashes to be reduced the following counter measures need to be experimental with:

- Physical segregation of slow & fast traffic
- Provision of 2.5m paved shoulders with delineation devices like cats eyes, studs, rumble strips (300mm in width) between the main carriage way & the shoulder.
- Provision of frequent & convenient under passes (at the same level as surrounding land with highway raised to provide clearance) for tractors, pedestrians, bicycles & NMT.
- Traffic claiming in semi urban areas & villages.
- Provision of adequate run off area with out impediments is very important on highways.
- Need for development of standards for provision of convenient tunnels & other crossing facilities in terms of designs & frequencies.
- Need of “service roads” along the highways for short distance trips for local traffic.
- Vehicle design issues need special consideration in aspects like body designs, provision of impact absorbing padding lighting arrangements roll over characteristics etc.
- Other standards & institutional issues have to be considered like–helmets for MTW Seatbelts, windshields for cars law against use of cell phones in moving vehicles.

However, the expertise available in India in traffic management and safety research at all levels (central, state, city and departmental) is not adequate for the task at hand. There are no well funded and functional road safety departments at any level any where in the country. The funds allocated for road safety work, audits and research are also critically sub-optimal. Very few academic and
research institutions in India have dedicated road safety professionals at present. This is because the subject has not been given any importance and no specialized groups have been set up which have the critical mass necessary to produce meaningful work on a sustainable basis.

The real issues and problems which road users face and which are associated with road safety must be identified and understood. Institutions, both governmental and non-governmental, have to be set up and funded so that road safety programmes can be set and implemented on a sustainable basis. The identified road safety plans and strategies must have the acceptance of a wide range of community groups and new technologies and designs must be identified, developed and implemented.

In recognition of some of these facts a recent report published by the Planning Commission of the Government of India has included the following policy recommendation in the text of the Tenth Five Year Plan document on the road sector:

“To evolve suitable corrective measures and initiate actions it is imperative to have scientific analysis of accidents. To improve safety in the long run, safety audits must be undertaken on all the roads. To save the accident victims it is essential to strengthen trauma care centres and hospitals to exclusively deal with accident cases. Highway surveillance through automated cameras and police patrol may be enhanced. To address this serious problem of road accidents Road Safety Boards will have to be established at different levels namely, District, State and Central. These institutions will address this problem on rapid and sustained basis.”

* Henry Ford Professor for Biomechanics and Transportation Safety Transportation Research and Injury Prevention Programme Indian Institute of Technology New Delhi, India

- S>m°. {XZoe _mohZ

- Dr. Dinesh Mohan
उत्तराखण्डील पडण्याची-झकडणाची भीती कमी कसी करावं?

हान असतानाची घसरण पडण्याची गंमत आढळते? हे आणि लोक उडी माजल उठावत राहतो व कोठेच लागते नसल्याची वलाशणी करत होतो. जरी हान मोठुन प्लेस्टर घातला तरी त्यांनी महान वापर व ल्या प्लेस्टर विभागात वाढत असते. इमोड फाट व ल्या लोक तर त्या घातकतेच्या वाढते नसल्याची वलाशणी करत होते. त्याकाळी वाढत नसल्याची वलाशणी कसी करावे असू लागते?

1) वानूळू लोक व्याचे घातकतेचा संचालन करत असते. याचे वाढवणे तरी त्यांनी राहून घातकतेचा संचालन करत असते. जर त्यांचा वाढवणे तरी त्यांनी घातकतेचा संचालन करत असते.

2) शारीरिक मुद्या होणारे अपघातांच्या जंग जोडताने तर 2 टक्के लोकांचे मरण ओढवतेत. वृद्धाश्रम राहण्याचा जेटल नागरिकसंघांचे ६० ते ९० लोकांचे घडळणे हे शारीरिक मुद्यांचे किंवा घेत असलेल्या ओषधीया विभागामुळे होते, तर फक्तशेत मात्र तरी अडकलून घडळणत असल फक्तशेत असलेल्या सापडतात. जुडलिंगाच्या मागूस घडळणा की हातचाळ घातकतेचा पावसात. एका जागी स्वस्थ बसून सहायतेचा हव्हा हव्हा आत्मसमर्पणे सहवा आपल्यास मात्र त्यांनी पडण्याचे चांगेसेच आपल्यावादी घाततात. म्हणून अशा व्यापत जर घडळणाच्या वाढत जर घडळणाच्या व आत्मसमर्पणे सहवा आपल्याच असेल तर व्यापार आपल्याच वेगवेगळ्या काळजऱ्या धोका काळजऱ्या घेतल्यास बनाय अंत्य टडू शकतात.

- डोळ्यांनी नीट दिसत नसेल तर वेळी डॉक्टरांकडून डोळे तपास. मोतीबिंदू, काचिबिंदू झाले असतील तर वेळी त्यांची शक्तिक्रम फर्क नाही.

- दारु किंवा तत्सम मादक वसाय, झोपेच्या गोल्या, एल्जीबीसी गोल्या, नेशनल दूरी करण्याचे ओषधे वाच्या सेवेच्या सहभागी व आत्मसमर्पणे सहवा आपल्याच असेल तर व्यापार आपल्याच वेगवेगळ्या काळजऱ्या धोका काळजऱ्या घेतल्यास बनाय अंत्य टडू शकतात.
Musculoskeletal disorders are the most common causes of severe long-term pain and physical disability affecting many millions of people across the globe. They have an enormous impact on the individual, society and health care social systems. There are effective ways to prevent or treat these disabling conditions. But we must act on them now.

-Kofi Annan
Secretary-General, The United Nations
osteoporosis & Osteomalacia affect nearly everybody in later years of life causing significant wearing of bones that form a part of the locomotor system of the body.

Osteoporosis also known as brittle bone disease is characterised by poor or deficient formation of bone while osteomalacia relates to deficiency in its mineralisation.

Injury prevention in elderly consist of following measures:

A) Injury prevention at home
Ideally the elderly should live in dwellings which are on a single level. Falling off stairs form an important mechanism & could be avoided by selecting such an arrangement within a home. Rooms should be spacious & well lit with a limited amount of furniture that is absolutely necessary. There should be no barriers between doors & corridors and indeed walking areas should have bannisters for support. Flooring should be of a non slippery type & often times uniform carpeting of the whole dwelling is desirable.

Washrooms should have wet & dry zones with support, particularly applied to walls in the wet area. Showering or bathing in the wet area should be carried out in a seated posture on a stool or chair fixed to the bath floor. Bath or shower mat could also aid in providing a non-slippery surface.

B) Injury prevention while outdoors
It is best to wear non-slippery & comfortable footwear while going outdoors.

Taking a walking aid, such as stick, usually is a safe practice and one should always try to walk facing the oncoming traffic, i.e. the right hand side of the road.

It is important to avoid uneven surfaces and paths or roads that have potholes or ditches.

These are some of the measures which could help in the prevention of injuries in the elderly.
Dealing with Arthritis

My joint pains started at very young age. Using pain killers kept me active. After I was married and had two kids, my condition worsened. My elbow joint was stiff. After a surgery, I regained some movement of that joint. Ayurvedic medicines and acupuncture treatment were ineffective. I was unable to do simple chores and was mentally depressed. Then I visited a well known rheumatologist who told me that surgery is the only treatment for the joints that are disfigured. With his prescribed medicines and the advice regarding controlled diet, proper exercises and positive attitude, I have recovered and am leading normal and happy life.

Padmini Vyapari
तेथे कू मारसे जुकती

श्री यवन्म जोगेश्वर, सतारा

लताना माझे घोटे खऱू दुखतात. ऑफधे धेंधूनाही थांबेवाट महणून मी RA Test केली, ती +ve आली आणि वेगव्या प्रवासास सुरुवात झाली. त्यानंतर पायावर नव्हे तर दीड दिवसाच्या महण्यात लगातांगत तिथे चालत असे. सुरुवातीला पाव, इथे जयचित प्रवासास सुरुवात झाले. दोन माही तिथी २ो महिन्यात त्याच प्रवासास बंद केले. कामानिमित एस.टी. क्षेत्र ३ तास प्रवास, कामावीरील प्रेक्षण आणि दुर्घटना वाढताचा लागला. त्यांच्या लागत वेगव्या आपेक्षिकच आजारपण, तिथी शुभ्रा, होशपिल्लाच्या वेळी शेती वृद्धावकालाने झाले निळ्ळा एवढी प्रवासास मानसिक तांग व दुर्घटना हा दोहरात वाढ झाली. सुरुवातीला सतारांच्या देखील डॉक्टरांनी सांगीतूनच, R.A. Test +ve असली तरी, त्यामध्ये गंभीरता सामर्थ्य नव्हे. संधिवाट हे दुर्घटना फार विकट असते हे जसा कऱ्या वेळ जातील तसावर अनुभवावेच पत्ते.

पुढे माझी पुरवठा बदली झाली व रोजचा प्रवासाचा व इतर आस खऱू कऱ्या झाला. दस्तमाने वेगव्या ओषधिभोजनाची प्राप्ती झाली होती. वाटतले होती कुलकूर आयुर्यकर्ता दुर्घटना बरे होऊ नाही – जाईल झुळाय! यें पने झाले नाही.

२००० हा वर्षामध्ये वेगव्या अनंत प्रवास झाले. आपल्याला भेटावर आपले मित्र, नातेवाईक हे आपल्या काळजीत वेगव्या डॉक्टरांची, पंढरीची, इतरांच्या अनुभवाची माहिती वाचून सांगीत मिळाला व आणणे ते नेल्या. ती सर्व काळात होमियोपाथी, आयुर्वेद, ओस्पतिक्ष, व आधी फिक्सेड सर्जन, असे वेगव्या झाले. पण उपयोग नाही.

या वेळी एका डॉक्टरांनी तर स्पष्ट सांगली ती सर्वे Shopping केल्यास उभार बदलून नका. मध्यतमी तर दुर्घटना करू झाला.

ESR-१०० पर्यंत गेला, घरात सुरुला काही व आधार ठेऊन चालावे लागले. दुर्घटनेचे रुझू कोसळत व नये कोहे स्थिर होईल. तर दुर्घटनाच्या दुर्घटना कऱ्या महणून एक कायद धेऊन सुरुल ती कऱ्या मी करून शिवरती. मी कऱ्या तरता नाही, तसा धंदा ही नाही. पण दुर्घटनाचे भरत खाली ही लेली ती कऱ्या मी कऱ्या. दुर्घटनाकडेच लब जीवन कऱ्या झाले, वेळ बऱ्याच गेला. प्रथम हा कऱ्या कऱ्या कऱ्या ओळी व नूतन निरस्तरता होता. एक तत्काळ आत्मक्रम प्रकाश किंवा दिसतो व त्यामुळे कऱ्या त्याच्या शेवट बदलावा लागला.

आम्ही फळमुळे डॉक्टरांनी शेवटी सल्ला दिली काही आता इतर उपचारात जास्त बेळ घालू नका. कारण जे सांगी अजून बऱ्याले आहे त्यांना वाचवले, दिसतो आत्मक्रम आहे. संधिवाट त्यांचे नव्य त्यांची सुधाराचे. डॉक्टरांनी पुढे असलेली सांगीतली त्यांची अंधविश्वासी औषधी वाढी इंकॅएस बदल लोकमध्ये भीती व गैसमज जास्त असतात. त्यांच्या कऱ्याने रट व लवकर याची तपासणी कऱ्या औषधात बदल कऱ्या इंकॅएस टाकला येतात. यांतरं संधिवाट त्यांची नियमित भेट व त्यांची सांगीतलती ओषधी कार्योपरापण वेगव्या सुरुवात केली. त्यांची सुचिविदेशी किवीतीसंपर्फिस्ट याच्या सल्लयानुसार थोडेफार

‘माई’ - ऑक्टोबर २००३ विशेषांक

MAI - October 2003 Special Issue
I have been suffering from rheumatoid arthritis for a number of years. The aches and pains, restricted to knees and feet, were slowly affecting other joints. RF titre and ESR values were high and I had problems of movements of joints. The friends and relatives were giving advices of all kinds and I was following them with a hope of feeling better. I tried ayurveda and homeopathy medicines, acupuncture, visited orthopaedic surgeons, but nothing helped. Finally, my family doctor advised me not to shop around, change doctors and "Pathies" often. He recommended that I shuld consult a well known rheumatologist in Pune. I started his treatment, diet and exercises prescribed by his physiotherapist. I can walk normally and am leading life with a positive attitude. Generally, Patients are afraid of allopathic drugs due to their side effects. A good allopathic doctor prescribes highly effective drugs and watches for any side effects carefully.

Vaman Joglekar