



Low Back Pain and Low Back Care

Dr. Vinod A. Mittal

MS (Orth.), MBBS, DPC

Orthopedic Surgeon

English–Hindi–Spanish–Haitian Creole–Portuguese

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Translators

Hindi: Priti V. Mittal

Spanish: Altagracia P. Mayers

Haitian Creole: Idi Jawarakim

Portuguese: Patricia B.P. Dos Santos

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Foreword

Low back pain, with or without associated sciatica is one of the most common medical problems. In my days as an orthopedic resident medical officer in the 1970s, I was rather disappointed with the treatment of this condition. Conservative management consisted of bed rest, leg traction, medications and back extension exercises (backward bending). If there was inadequate relief in six weeks, a myelogram was done to find out if there was a neural compromise, and if so, an operation performed such as removal of the intervertebral disc. Many patients had temporary relief and then returned with low back pain and sciatica in a year or two. In one hospital's orthopedic unit where I took over as head of the unit in the 1980s, 40 of the 64 backs operated upon returned with low back pain and/or sciatica.

An alternative was sought and found in conservative (a specific type), non-operative management. The results of conservative treatment have been shown to be comparative or even superior to operative treatment. I have treated about 15,000 patients of low back pain with conservative management as outlined in this book with gratifying results.

This book is meant for educating the lay person as well as general medical practitioners and paramedics.

The booklet in English has proven to be of value in imparting education on the subject. Subsequently it was brought out in Hindi and Marathi to reach out to more people in India where it has received much media coverage.

I am grateful to Eddy Toussaint, the publisher of the present book, for bringing this out in five languages to reach a still wider audience. Many thanks too to all the translators, Priti Mittal (also the illustrator), Altagracia P. Mayers, Patricia B.P. Dos Santos and Idi Jawarakim. Finally, thanks to family members Bharati, Nikhil and Ravi for technical help.

—*Dr. Vinod A. Mittal*

Understanding of low back pain and sciatica

Low back pain (LBP) occurs in 80% to 97% of the adult population, disabling enough to prevent normal routine, as reported by different workers on the subject. It is the commonest cause of man-hours of work lost in industry.

The spine, developmentally, was never meant to take weight; but only to protect the spinal cord. However, it was forced to take upon the former function ever since man evolved from a quadruped to a biped. It would probably take millions of years for the spine to adapt itself to this new weight-bearing function.

Up to teenage years and even early childhood, the bones have a layer of cartilage, which, being resilient, acts as a buffer, absorbing shock of weight bearing, walking, running etc. By the age of 22 to 25 years, most of the cartilage is absorbed into relatively harder bone. Buffering action no longer occurs effectively and bone impacts against bone, causing inflammation in the joints, especially the weight bearing ones, adhesions, outgrowing of the ends etc., namely osteoarthritis. The cumulative effect of this shows up as stiffness and pain.

Ageing cannot be prevented, but its effects can be decreased by low back care—something everyone should learn about just as much as say, dental care. However, before one proceeds to low back care, it is good to understand the mechanics of low back pain.

The spine if seen from front backwards is meant to be in a straight line (fig. 1). However, in many people, it might be curved. The vertebrae are the building blocks of the spine. In a curved spine, the inter-vertebral space opens up on the convex side and gets closer on the concave side as in a bent rod. This causes unevenness of pressures

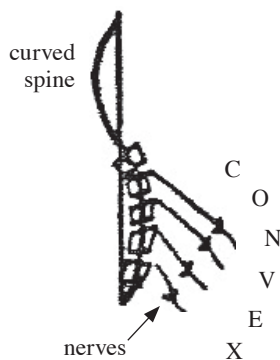


Fig. 1

पीठ के निचले हिस्से का दर्द और शियाटिका का ग्यान

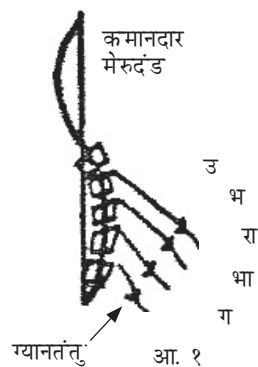
रीढ़ के निचले हिस्से का दर्द ८०-९६% प्रौढ़ लोगों में होता है , जिससे उन्हें रोजमर्रा के कामकाज में परेशानी होती है । ऐसा इस विषय पर कार्य करने वाले जानकारों का मत है । यह एक मुख्य कारण है जिसकी वजह से औद्योगिक संस्थाओं में कामकाज के घंटे खोये जाते हैं ।

रीढ़ की हड्डी का मुख्य कार्य सिर्फ मेरुदंड की हिफाजत करना था, न कि बोझ उठाने का काम । लेकिन जब से मानव ने चार पैरों वाले प्राणी से दो पैरों वाले प्राणी तक की प्रगति की , उसे मजबूरन यह कार्य करना पड़ा । इस ढाँचे को शायद हजारों वर्ष लग जायेंगे, जब वह इस बोझ उठाने वाली नई भूमिका को निभाने में समर्थ होगा ।

युवा अवस्था और उसके कुछ समय बाद तक हड्डियों पर एक तह कार्टिलेज की होती है । यह लचीला होने की वजह से शरीर पर पड़ने वाले किसी भी प्रकार के धक्के को सह लेने वाले मध्यस्थ (बम्पर) का काम करती है । बोझ उठाने, दौड़ने, चलने आदि गतिविधियों से उत्पन्न कम्पन को सहने में मदद करती है । लेकिन उम्र के २०-२५ वर्ष तक यह कार्टिलेज सख्त हड्डियों के रूप में परिवर्तित हो जाती है । धक्के को सहन करने की शक्ति कम हो जाती है । एक हड्डी दूसरे हड्डी से टकराती है जिससे जोड़ों में सूजन और चिपचिपाहट हो जाती है, खासकर वजन उठाने वाले जोड़ों में इनके छोर बड़ जाते हैं । इस स्थिति को औस्टिओ-आर्थोसिस कहते हैं। इससे जोड़ों में दर्द और कड़ापन आ जाता है ।

उम्र के बढ़न को तो रोका नहीं जा सकता , लेकिन उनके कारण होने वाले प्रभावों को पीठ की देखभाल से कम अवश्य किया जा सकता है । हरएक को इसका ग्यान होना उतना ही ज़रूरी है , जितना कि दाँतों की देखभाल का ग्यान होना । बहरहाल , पीठ के निचले भाग की देखभाल की जानकारी प्राप्त करने से पहले यह समझना आवश्यक है कि यह दर्द किस प्रकार उत्पन्न होता है ।

रीढ़ को आगे से पीछे की ओर देखने से इसे एक सरल रेखा में होना चाहिये, लेकिन कुछ लोगों में यह टेढ़ा या कमानाकार होता है (आकृति १) । मेरुदंड अलग अलग जोड़ों या मनकों (vertebrae) से बना एक ढाँचा है। कमानाकार मेरुदंड में इन जोड़ों के मध्य का भाग बाहर की ओर (convex) खुलता है और धसा हुआ (concave) भाग नज़दीक आता है जिस तरह मुड़े हुए सलिये में होता है । इससे रीढ़ की हड्डी पर असमतल दबाव पड़ता है , जिसके कारण औस्टिओ-आर्थोसिस हो सकता है। मनकों के बीच में, मेरुदंड से निकले ग्यानतंतु (nerves) होते हैं। इन पर दबाव या खिंचाव पड़ सकता है। इसके कारण रीढ़ के निचले , और टाँगों के पिछले भाग से ऐंड़ी तक दर्द का संचार हो सकता है । इसे शियाटिका कहते हैं ।



El dolor de la parte baja de la espalda y su cuidado

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Cirujano Ortopeda

Traductora: Altagracia P. Mayers

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Entendiendo el dolor de la parte baja de la espalda y la ciática

El dolor de la parte baja de la espalda ocurre en el 80% al 97% de la población adulta, incapacitandola lo bastante hasta impedir la rutina normal, según reportaron diferentes personas que han trabajado en este tema. A nivel industrial, es la causa más común de horas de trabajo perdidas.

De acuerdo al desarrollo humano, la espina dorsal nunca fue concebida para soportar peso; su función era proteger la médula espinal. Sin embargo, la espina dorsal fue forzada a tomar esa función cuando el hombre evolucionó de cuadrúpedo a bípedo. Probablemente tomaría millones de años para que la espina dorsal se adaptara a su nueva función de soportar peso.

Hasta la edad de la adolescencia y aun desde temprano en la niñez, los huesos tienen una capa de cartílago, la cual siendo

Doulè nan Senti ak Swen Pou Senti

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Chirijyen Òtopedis

Tradiksyon : Idi Jawarakim

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Ann konprann doulè nan senti ak sayatika

Doulè nan senti afekte ant 80 a 97% (pousan) nan popilasyon adilt-la nan yon pwèn ke anpil diferan travayè rapòte ke yo pa ka fè aktivite regilye-yo lè yo santi-l. Se rezon ki fè pifò moun pa al travay lè yo malad.

Zo rèl do-a okòmansman pat vrèman fèt pou sipòte pwa kò-nou. Sèl fonksyon-li se te pou pwoteje pati nan sèvo-a ki fè yon branch rive jouk nan zo kroupyon-an. Lè imen-an vin aprann mache, de 4 pat a 2 pye, zo rèl do-a vin fòse ranpli fonksyon pote pwa kò-a tou. Sa ka petèt pran kèk milyon ane anvan zo rèl do-a vin adapte a nouvo wòl pote pwa anlè kò-nou.

Jouk nou rive nan laj pou n'fòme oubyen menm lè nou nan kòmansman ventèn-nou-yo konsa, zo nou-yo kouvri ak yon kouch zo krip trè rezistan, ki fòme yon kousen ki absòbe pwa kò-a, sekous mache, sekous kouri, elatriye. Letan nou gen 22 a 25 an-yo konsa, pifò nan zo krip sa-yo transfòme e yo

Dor Lombar e Cuidados com a Coluna Lombar

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Cirurgião Ortopédico

Tradutora: Patricia B.P. Dos Santos

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Compreendendo a dor lombar e a dor ciática

A dor nas costas ocorre em 80% a 97% da população adulta incapacitando a pessoa a ponto de impedi-la de sua rotina normal como relatada por vários pesquisadores no assunto. É a causa mais comum de perda de mão-de-obra no trabalho.

A espinha foi desenvolvida somente para proteger a medula espinhal e não para carregar peso. No entanto, a espinha foi obrigada à assumir essa função quando o ser humano evoluiu de quadrúpede para bípede. Provavelmente, levaria milhões de anos para que a coluna se adaptasse à sua nova função de carregar peso.

Até a adolescência e mesmo no princípio da vida adulta, os ossos possuem uma camada de cartilagem que, sendo maleável, age como um amortecedor que absorve o choque de carregar

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