Chapter 1. :

Introduction

Anatomy of the Lumbar spine

- The lumbar spine contains five vertebrae. These vertebrae are the largest units of the vertebral column, increasing slightly in size from L I ,to L5. The elements and pracesses of the neural arches are also heavier than in any other spinal area (Epstein,1989).This reflects both their increased weight-bearing function and the larger muscle forces to which they are subject

(Christenson, 1997)

-The *"lumbar vertebra"* is a ring shaped osseous segment made up of two principal parts, an anterior one, termed the body, and a posterior one termed the vertebral arch, these enclose the vertebral foramen. (Fig's 1 and 2) .

-The opposed surfaces of vertebral bodies are firmly connected to each other by discs of fibrocartillage termed " *intervertebral discs*".Each intervertebral disc consists of an avascular gelatinous nucleus bordered above and below by the cartillagenous vertebral end plate and peripherally by the annulus fibrosus which has very secure fibrous attachements to the vertebral margins. The annulus is reinforced by a broad and very substantial anterior longitudinal ligament. The gelatinous nucleus, enclosed within a fibrocartillage annulus, is an excellent elastic shock absorper. Each intervertebral disc of lumbar spine is larger and thicker than the one above, except for the lumbosacral disc which, though larger in cross section than L. 4-5 disc, is usually thinner. The normal lumbar lordosis is mainly due to slight wedging of the inter-vertebral disc (Roaf, 1960) .