ABDOMINAL CAUSES OF BACKACHE

By Laurence F. Tinckler, M.D., Ch.M., F.R.C.S., D.T.M. & H.,
(Professor of Surgery, University of Singapore)

This paper is given to complement that by Mr. Lloyd Griffiths who has spoken on "Orthopaedic Causes of Abdominal Pain." It is the obverse side of the coin so-to-speak.

Backache is a common non-specific symptom, the cause of which may lie in diverse specialist fields and may not be readily apparent. In this regard it is akin to headache, for the treatment and diagnosis of which the unfortunate sufferer may be passed on from one hospital department to another — to the occulist for refraction, the dental surgeon for tooth extraction, the oto-rhino-laryngologist for sinus lavage, the radiologist for skull X-rays and the psychiatrist for analysis — when all he may be really suffering from is tension headache based squarely on an overdraft and a house mortgage!

Similarly the elusiveness of an explanation for backache leading to rational treatment thereof is emphasised by the clientele of osteopaths, cheiropractors, and acupuncturists and other practitioners of "fringe medicine" about which Brian Inglis has recently written. Not a few sufferers from backache end up on the osteopath's couch after doing the rounds of such orthodox specialists as orthopaedic surgeons, gynaecologists and general surgeons. (Fig. 1).

Fig. 1.

When complained of by the patient "backache" may imply pain felt anywhere from the occiput to the ano-rectum and the importance of getting him to locate the site of the pain precisely is an obvious precedent to appropriate management. More often than not, however, the lumbosacral region is indicated and I will confine my remarks to that presentation.

As a rough, but useful working rule, any patient complaining of back pain who can bend down and touch his toes has not got a musculo-ligamentous cause and is worth investigating for visceral disease.

Back pain arising in disease of abdominal viscera is felt in the lower dorsal and lumbosacral areas. It has the following features — vagueness, poor localisation and may be associated with diffuse tenderness. As a special case, pain of renal origin may be accompanied by focal tenderness over the kidney which is the basis of the "kidney punch" sign. With this exception back pain associated with finger-point tenderness is not due to visceral disease.

It is characteristic of visceral pain that it is not felt precisely in the organ concerned but reaches conciousness as if it were arising from an area of the body wall adjacent or remote from the source, a phenomenon which is termed "reference of pain" and which is due to false localisation of the origin of the pain by the sensory cortex of the brain. In terms of biological significance, there being no "survival value" in precise localisation of visceral pain as there is with pain perception from superficially placed tissues of the body, evolutionary processes have not developed this faculty in homo sapiens.

There is, however, no fundamental difference between pain sensation from visceral and somatic structures. The afferent nerves fibres are similar, relaying in the posterior root ganglia and transmitting impulses destined for appreciation by the thalamus and sensory cortex. The only obvious difference is that

somatic pain fibres run in the peripheral nerves and those from abdominal viscera in the so-called autonomic nervous system a distinction that is wholly artificial and merely devised for the convenience of anatomical description.

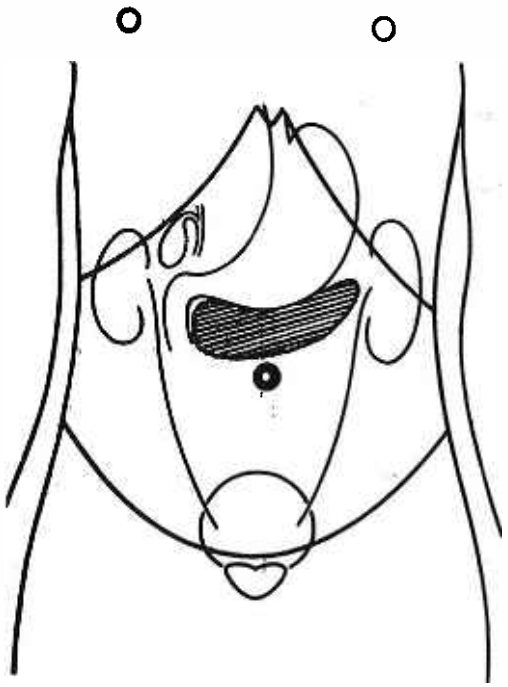

Fig. 2.

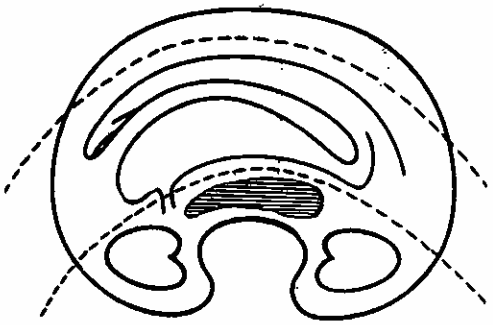

Fig. 3.

It is unusual for pathology of abdominal viscera to manifest solely with back pain, there is usually some anterior component however slight. On the whole it is retroperitoneal viscera which give rise to pain felt in the back; for example the diseased pancreas (Figs. 2 & 3), intraperitoneal structures such as the Gastro-intestinal tract suspended in the peritoneal cavity on a mesentery, gives rise to pain felt anteriorly except where the tract loses its mesentery and gains fixity to the back portion of the body cavity as does the oesophagus and rectum (Fig. 4). Oesophagitis due to reflux of gastric contents for instance provokes pain felt between the scupulae. Ano-rectal pathology such as prolapse, proctologia fugax and fissures give rise to pain felt in the sacral region. In between these fixed extremities of the gastro-intestinal tract pathology is only responsible for back pain when it progresses and involves the posterior abdominal wall. The most striking example of this phemomenon is posterior penetration of peptic ulceration either gastric or duodenal. Back pain experienced by the known sufferer from peptic ulcer indicates progress of ulceration beyond the wall of the stomach or duodenum and heralds the possibility of massive bleeding due to erosion of a large extra-gastric vessel and the unlikelihood of successful medical management. Back pain under these circumstances has important prognostic and therapeutic significance.

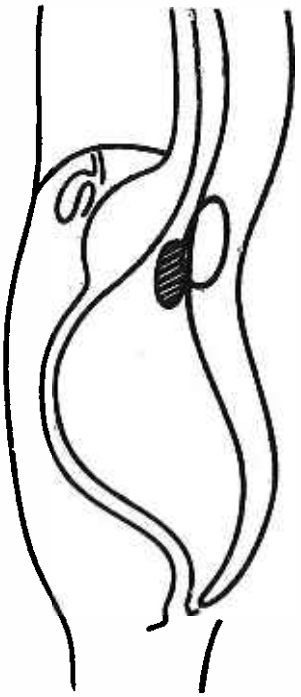

Fig. 4.

Low back pain is often attributed to disease of structures in the female pelvis and regarded as a gynaecological problem. Jeffcoate (1962) however calculates that gynaecological lesions probably account for less than 1% of all cases of low back pain. Uterine prolapse, like rectal prolapse, is an unequivocal cause of backache due to drag on the utero-sacral and cardinal ligaments.

In general any large intra-abdominal tumour such as an ovarian cyst may cause backache because the muscles of the trunk

have to support the added burden and also have to sustain the lordosis necessary for the patient's balance. It should be noted however that pain in this instance does not arise in the viscus concerned but indirectly from the over-worked back muscles.