Abstracts from Medical Literature.

RADIOLOGY.

Lateral Atlanto-Axial Displacement in Spinal Injuries.

GEORGE JACOBSON and DENIS C. ALDER (Radiology, September, 1953) state that the various types of lateral offset of the atlas and axis require radiological investigation. The radiological signs in the lung may be observed either within an opacity caused by the pneumomediastinum or outside it. They are easier to perceive when the air is enclosed in sizeable spaces. The following lucencies have been observed: (a) transluences surounded by a very thin wall, similar to emphysematous bullae, (b) transluences of a slightly thicker marginal zone, suggestive of "air-filled pseudo-cysts", (c) transluences within characteristic sinuous outline as if formed by a number of small vesicles.

Significance of a Solitary Mass in the Lung.

C. ALLEN GOOD, R. T. HOOK, JUNIOR, and J. R. MCDONALD (Am. J. Roentgenol., October, 1953) discuss the problem of the solitary circumscribed mass in the lung. The authors conclude that the only sign of benignancy which can be ruled on with reasonable assurance is the demonstration by radiological methods of the presence of calcium in the mass. Certainly no reliance can be placed on any other radiological feature; in addition, there is no laboratory procedure or other special examination which will settle the question that a lesion is benign. Some procedure, such as bronchoscopic biopsy and examination of the sputum, will indicate that a lesion is malignant.

Pulmonary Interstitial Emphysema.

G. HENSIEMEN and J. P. WHITEHEAD (Brit. J. Radiol., October, 1953) state that pulmonary interstitial emphysema occurs more often than is generally realized. It can be found after severe contusion of the chest cage in the absence of fractures, and it is frequently associated with pulmonary hemorrhage. Radiological evidence of pulmonary interstitial emphysema may be given not only indirectly by the presence of mediastinal emphysema or of pneumothorax, but also directly by radiological examination. The radiological signs in the lung may be observed either within an opacity caused by the pneumomediastinum or outside it. They are easier to perceive when the air is enclosed in sizeable spaces. The following lucencies have been observed: (a) transluences surrounded by a very thin wall, similar to emphysematous bullae, (b) transluences of a slightly thicker marginal zone, suggestive of "air-filled pseudo-cysts", (c) transluences within characteristic sinuous outline as if formed by a number of small vesicles.

Thoracic Renal Ectopia.

H. STEPHEN WREN and M. HARLAN JOHNSTON (Am. J. Roentgenol., November, 1953) state that a broad-based thoracic mass adjacent to the postero-medial portion of the diaphragm should arouse suspicion of high renal ectopia. With proper studies it should not be difficult to differentiate a thoracic kidney from pulmonary tumours, pleural and fluid collections, mediastinal masses, diaphragmatic tumours and herniae of other abdominal viscera. On routine excretion and retrograde pyelographic examinations, the X-ray beam is directed towards the fourth lumbar vertebra. In this manner, the relation of the diaphragm and kidney becomes distorted, the normal and abnormal position of the diaphragm being projected above the upper pole of the ectopic kidney. Close attention should therefore be paid to the postero-medial portion of the kidney with reference to the spine, ribs and posterior costo-phrenic sulcus. In pyelograms in these cases it is advocated to centre the X-ray beam to the level of the diaphragm in both the antero-posterior and lateral projections, in order to obtain an undistorted view of the relationship of kidney and diaphragm. In addition to the anomalous position of the kidney, the abnormal ureteral length, the anterior renal hilus and the abnormal shape of the kidney should be noted.

Pepptic Ulcer, Gastric Carcinoma and Arteriosclerosis.

ARTHUR ELKIN (Am. J. Roentgenol., November, 1953) states that there is a very frequent association of gastric ulcer with arteriosclerosis and an extremely rare occurrence of calcified atheroma in the abdominal aorta in patients with gastric carcinoma. From a comparison of the percentage figures of calcified atheroma in the abdominal aorta in patients with gastric carcinoma. From a comparison of the percentage figures of calcified atheroma in the abdominal aorta in patients with gastric carcinoma, it is evident that the frequent association of gastric ulcer with arteriosclerosis cannot be attributed to mere coincidence. Calcification of arteries may be asymptomatic and does not necessarily lead to arterial obstruction, but it is often the cause of slowing down the vascular stream. The conditions are set for a disturbance of balance between blood supply and demand in the extremities and in angina of effort. In analogy to these conditions a disturbance of balance between blood supply and demand may occur in the stomach, resulting in damage to the mucous membrane and subsequent ulceration. Viewed radiologically, gastric ulcers in the aged are often large, and giant ulcers are almost exclusively found in elderly individuals. Furthermore, with advancing years the ulcers are usually placed farther away from the pylorus than those in the younger age groups. The duodenal ulcer series shows only a slightly higher percentage of calcified atheroma of the abdominal aorta than the control cases. This finding may be explained by the observation that many of the duodenal ulcers met with in the older age groups are of long duration, usually dating back to periods of life in which arteriosclerosis is unlikely to have played a part in their pathogenesis. However, some duodenal ulcers have their onset in later life, and in these a causative relationship to arteriosclerosis also seems likely. Viewed radiologically, gastric ulcer is often large and may lack the spasticity of the duodenal cap so frequently seen in duodenal ulcers of the younger age groups. The close association of gastric ulcer and carcinoma of the stomach in their relationship to arteriosclerosis also seems likely. This observation provides a valuable radiological sign for the often difficult differential diagnosis of ulcerative lesions of the stomach. No radiological sign can be considered as infallible, but the author's investigations suggest that calcification of the abdominal aorta, which is clearly demonstrable on skagrams, is evidence in favour of benign gastric ulceration, whereas absence of calcification in doubtful cases should raise suspicion of malignant change.

Bone Changes in the Skull in Dystrophia Myotonica.

J. E. CATCHerer (J. Bone & Joint Surg., August, 1952) reports 14 cases of dystrophia myotonica and gives the post-mortem findings in another case. All subjects had radiological or other evidence of abnormalities of the skull. The most constant were a thickened calvarium, hyperostosis interna, small flat osteophytes, and extensive sinuses. It is believed that the high incidence of these changes cannot be coincidental, and that they should be accepted as some of the variable features of dystrophia myotonica.

PHYSICAL THERAPY.

A New Method of Treatment for Arthritis.

N. S. FINZI (Brit. J. Radiol., September, 1953) states that in March, 1937, he treated a patient with severe arthritis of the hands, of twenty years' duration. Severe pain in the neck had recently been present, and this was treated by irradiation. A large field, covering the cervical-dorsal part of the spine, was used; the dose given was 120r. A week later the pain in the neck had gone, and the pain and swelling in the hands was much less than these had received no irradiation. Following this, a series of patients with arthritis of the limbs was treated by irradiation of the cervical-dorsal or lumbar part of the spine. The method used was to give 70r to the thyroid gland, the dose being later reduced to about 90r. In all, 12 to 16 treatments are given.