FIG. 1

FIG. 2

FIG. 4

FIG. 1.—Normal fundic mucosa (artist's drawing).

FIG. 2.—Fundic mucosa in superficial gastritis (artist's drawing).

FIG. 3.—Fundic mucosa in atrophic gastritis (artist's drawing).

FIG. 4.—Normal pyloric mucosa (artist's drawing).

FIG. 3

ALFRED BECK: OBSTETRICIAN'S STRESS FRACTURE

FIG. 1. — Double spiral fracture of left third metacarpal bone. Radiographs taken on day of delivery.

FIG. 2. — Radiographs taken five weeks later, showing good callus formation.

Medical Memoranda

Obstetrician's Stress Fracture

[WITH SPECIAL PLATE]

Brit. med. J., 1964, 2, 1509

The obstetrician cares for the safety of the foetus *in utero*. I wish to record a danger the obstetrician himself might meet *in utero*. Bony injury to the obstetrician during delivery of the baby has, to my knowledge, not been reported.

It is well known that the pressure which can be developed by the contraction of the uterine muscle alone is 3.4 lb./sq. in. (2.4 kg./sq. cm.) (Reynolds, 1949). The following is a report of a double spiral fracture of an adult's metacarpal bone, caused by uterine contractions.

CASE REPORT

At 4.40 p.m. on 20 March 1957 the obstetrical registrar, aged 30, reported at the accident unit. In the afternoon he had delivered a live baby, a girl weighing 7 lb. 14 oz. (3,570 g.), by elective lower segment caesarean section.

The indications for the section in a very obese, multigravid Mohammedan of 5 ft. 0½ in. (154 cm.) in height were breech presentation at the 42nd week of pregnancy; hypertension; a 14-year interval since delivery of her previous child; and failure of labour to become established even after a medical induction that included a Pitocin (oxytocin) drip.

A uterus closely moulded about the foetus was exposed by a midline sub-umbilical incision seven days after rupture of the mem-

branes. There was no differentiation between the upper and lower segments. No liquor was present. The breech was high.

After incising the uterus the obstetrician put his left middle finger into it to lift and stretch the incision. A strong uterine contraction started at the same time. The obstetrician felt acute pain in his left hand, and after the operation he found a tender swelling on the back of the hand.

Radiographs showed a double spiral fracture of the shaft of the third metacarpal bone (Special Plate, Fig. 1). A plaster slab was applied for 10 days. Bandages and early active exercises followed. Within five weeks the fracture was healing soundly (Special Plate, Fig. 2). The patient is now a general practitioner. He has sustained no further bony injury since the accident of 1957.

COMMENT

The patient suffered a stress fracture. His third metacarpal bone could not resist the summation of stresses resulting from the pull of the hand against the suddenly contracting uterine wall.

Fatigue fractures in the upper limb are rare. The few reported ones were in the clavicle, first rib, and in forearm bones (Kitchin, 1948).

I wish to thank Mr. Dillwyn Evans, consultant orthopaedic surgeon, and Mr. Elliot E. Philipp, consultant obstetrician, for advice; and Mr. M. Robertson, clinical photographer, Asthma and Allergy Research Unit, for the illustrations.

ALFRED BECK, M.D., F.R.C.S., D.A.,
Traumatic Surgeon, Accident Unit, St. David's Hospital, Cardiff.

REFERENCES

- Kitchin, I. D. (1948). *J. Bone & Joint Surg.*, 30B, 622.
Reynolds, S. R. M. (1949). *Physiology of the Uterus*, 2nd ed., p. 256. Hoeber, New York.

Syndrome of Diarrhoea and Peripheral Nerve Changes due to Generalized Vascular Disease

[WITH SPECIAL PLATE]

Brit. med. J., 1964, 2, 1509-1510

The association of diarrhoea and peripheral nerve lesions is an important one to recognize and may in certain cases suggest a common vascular cause of both conditions. We record here two cases of this syndrome—one a case of myelomatosis and the other a case of angiokeratoma corporis diffusum.

CASE 1

A retired grocer aged 68 presented in August 1959 with a history of persistent diarrhoea, weakness of the legs, and loss of weight for the previous six months. All his symptoms increased in severity, and he was eventually admitted to the Bristol Royal Infirmary in June 1960. At that time he showed gross emaciation and severe peripheral neuritis and was having persistent and severe diarrhoea. X-ray films taken at this time showed that he was

suffering from multiple myelomatosis with pathological fractures of the ribs. A marrow puncture confirmed the diagnosis. Serum electrophoresis showed a high gamma-globulin, and absorption of vitamin B₁₂ and of xylose was impaired. He continued to suffer severe symptoms, and pentamidine failed to relieve his pain. He collapsed and died suddenly on 27 June 1960.

Necropsy showed an emaciated patient with many focal deposits of myeloma and pathological fractures of the ribs. The intestines showed thickening of the wall, particularly in the jejunum. Otherwise there was no macroscopical evidence of abnormality.

Histology confirmed myeloma in the ribs and vertebra and femur. The arterioles in the submucous layer of the jejunum, in the peripheral nerves, and the posterior root ganglia showed amyloidosis, and stained with Congo red and metachromatically with methyl violet (Special Plate, Fig. 1). The same changes were seen in the heart, liver, and adrenal glands, but no amyloid was discovered in the kidneys, tongue, or lung.

CASE 2

A housewife aged 62 was admitted to hospital in May 1962 with a history of diarrhoea that had lasted for four years, a loss of two to three stones (13-19 kg.) in weight over the last two years, recurring petechiae and a punctate rash for two years, and very persistent burning pain in the right hand for six months, which was the main reason for her presenting to her doctor and the reason for her referral to one of us (A.M.G.C.). She had been