The population at ages 0-15 has fallen by almost one-fifth during the past 20 years, and this must be taken into account when estimating the change in mortality. If the deaths are related to the average population aged 0-15 in 1922-5 and this factor is applied to the estimated population at 0-15 in 1940-1 (obtained by extrapolating a straight line fitted to the population at 0-15 of 1935-9) the resulting expected deaths for 1940-1 would be 8,722—i.e., 6,593 in excess of those observed.

We may conclude that the sum of the various factors operating towards a decline has resulted in a reduction of childhood mortality from measles of about three-quarters of what it was 20 years ago.

REDUCTION OF OLD-STANDING DISLOCATION OF THE KNEE-JOINT

BY

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There are two main indications for attempting reduction of a long-standing dislocation of the knee-joint: first, to relieve pain; secondly, to overcome shortening as a preliminary to an arthrodesis, or excision of the joint. Forcible manipulation for such cases is usually contraindicated, and wedge plasters are obviously ineffective. The case here described was treated by the method devised by Hamilton Russell (1924) for the treatment of fractures of the shaft of the femur. This was slightly modified, skeletal traction being used instead of strapping extension.

Case Report

History.—A man aged 56 had suffered from rheumatoid arthritis "for years." He had been confined to bed for over two years and, according to his doctor, the duration of the dislocation was about 18 months. On examination the right knee was obviously dislocated. It was flexed to 140 degrees, with the leg externally rotated through 50 degrees (Fig. 1). Under an anaesthetic there were about 10 degrees of movement present.

Treatment.—The hip was placed on an adjustable Braun splint, so that traction could be exerted in the line of the deformity (Fig. 2). Skeletal traction was applied through the os calcis. This was used instead of strapping so that the

FIG. 1.—Note the clear view of the tibio-fibular joint due to the marked external rotation of the tibia.

external rotation could be controlled. A sling was passed under the knee and attached to a cord which passed over a pulley (a) on a Balkan beam. Thence it was continued to another pulley (b) on the vertical limb of the Balkan beam at the level of the leg. A third pulley was fixed to the Böhler stirrup on the os calcis nail (c), and a fourth (d) tied to the upright just below b. The cord was then threaded over these and finally attached to a weight of 7 lb. The foot of the bed was elevated.

A cord was fixed from the outer side of the nail to a weight suspended by a pulley (e) on the horizontal limb of the Balkan beam to control external rotation.

Three weeks later a radiograph was taken, and it showed that the dislocation had been reduced (Fig. 3). During this

FIG. 2.—The traction under the knee pulls the head of the tibia forwards. The cord attached to the nail and passing over the pulley (e) helps to rectify the external rotation. The adjustable splint has been flexed to fit the contracted knee.

FIG. 3.—The dislocation has been reduced.

FIG. 4.—The external rotation has been corrected and the splint has been lowered so that the knee is almost straight.

time the patient did not complain of any undue discomfort. As the knee was on the adjustable type of Braun splint (Fig. 4), it was possible to lower its horizontal position and thus gradually to extend the knee. By doing this and altering the line of pull accordingly, the limb could be straightened completely. This took approximately 7 weeks.

Summary

A simple method of reducing an old dislocation of the knee-joint is described. The ease with which the reduction was achieved makes it possible that this case was exceptional; but the simplicity of the manoeuvre would seem to warrant a trial in such cases.

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