differences. The simple interpretation of the radiology is difficult and one has to be somewhat lenient. Mr. Kates also commented on the changes found at operation, which are usually more severe than one sees radiologically. With this too I would agree.

DR. P. J. L. HOLT (*London*) Some of the younger patients, and these are very often girls, complain of the postoperative scars. Now this is not wound breaking but wound stretching, and we were put off early mobilization because we felt that this was increasing the size of the scar when the tissues were tense.

DR. CAMP I have had no specific complaints of this nature from the patients, but those who were in the very young age groups, of which there are three patients with five knees, were in fact the ones who regained range of movement very slowly and we held back from manipulation or from forcing them. They did not appear to be left with an ugly scar.

Surgical Management of Severe Subluxations of the Rheumatoid Cervical Spine. By R. Q. CRELLIN, J. J. MACCABE, and E. B. D. HAMILTON (*King's College Hospital, London*).

21 patients with classical rheumatoid arthritis and severe subluxations of the cervical spine are reported. Fourteen had atlanto-axial subluxations with displacements ranging from 5 to 15 mm. (mean 9.5 mm.). The next most frequent level was at C4-5; this occurred in five patients with a displacement of from 3 to 10 mm. (mean 5 mm.). Thirteen patients underwent surgery because of symptoms or signs of spinal cord compression, or vertebral artery insufficiency. The operations comprised eight posterior fusions, three anterior fusions, and two laminectomies. The differential diagnosis, the radiological findings, the indications for surgery, and the results of treatment have been analysed.

Discussion

MR. D. O. HANCOCK (*Stoke Mandeville*) Could I ask what your operative indications are? Would you operate on all cases showing subluxation without neurological signs? If you would not, what sort of neurological signs do you look for? For example, would you operate for minimal hyperreflexia or would you prefer a little more? I quite agree about the extreme difficulty in assessing the power in these severely crippled patients, as I find it impossible to differentiate neurological loss from rheumatoid loss. Could I commend to your neurosurgeon's notice the excellent operation described by Newman and Sweetnam (1969) on the use of cancellous bone-chip grafts applied to the raw occiput and the arches of C1 and 2? This is a simple and most effective operation.

MR. CRELLIN I have also noticed this and it is certainly much simpler than passing wires around the laminae, which is why we employ a neurosurgeon. To answer the first point, we do not know when we should operate, and that is why I have suggested that several centres should co-operate to solve this problem. We have not felt that severe subluxation in itself was a reason to operate.

I do not think we shall know until the natural history of this condition is worked out. There are obviously many patients who have severe subluxation who have no evidence of spinal cord compression or vertebral artery trouble. Secondly, as far as the neurological assessment of the patient goes, it is an extremely difficult thing to decide. Our neurosurgeon puts great weight on two-point discrimination in his assessment of these patients, and speaking as an orthopaedic surgeon I probably would not notice anything wrong with them neurologically when he can! I think that if there is evidence of neurological impairment at a very early stage then it is time to operate. It is probably time to operate before that, but it is difficult to find out just when that should be. Are we to be guided by an actual amount of subluxation of x number of millimetres at the atlanto-axial joint, or should we wait for signs to occur? I do not know. I have left it an open question.

DR. W. W. BUCHANAN (*Glasgow*) I noticed the sharpening of the cervical spines. This is quite common in severe rheumatoid arthritis affecting the neck. I wonder if you have any ideas regarding the pathogenesis.

MR. CRELLIN I am afraid I have not. In one of the most severely affected of these patients, when we explored her neck from behind, we could find no evidence of cervical spines at all, at several levels. This is not obviously due to rheumatoid granulations or anything like that. I cannot explain why they disappear, but they just pull out like a piece of bubble gum and vanish.

NEWMAN, P. AND SWEETNAM, R. (1969) *J. Bone Jt. Surg.*, 51B 423

Dermal Arthroplasty. By B. N. BAILEY and S. N. DESAI (*Plastic Surgery Unit, Stoke Mandeville Hospital, Aylesbury*).

A technique of dermal arthroplasty of the finger joints has been developed in the Plastic Surgery Unit at Stoke Mandeville Hospital. The aim has been to achieve dynamic stability and restoration of a useful proportion of lost function and, if possible, of anatomical alignment. The results in 35 hands treated during the past 27 months have been encouraging. Certain aspects of preoperative assessment, surgical technique, and postoperative management have proved to be of paramount importance.

Discussion

DR. B. M. ANSELL (*Taplow*) Do you take any notice of wrist position, and does it in any way influence the end-results? Secondly, have you had any problems fairly late postoperatively—say after 6 months—with carpal tunnel and flexor tendon involvement causing a patient, who had previously been doing quite well, to lose movement, say by one year? Thirdly, what is the advantage of skin over silastic skid pads or prostheses?

MR. BAILEY To answer these questions one at a time:

Of course wrist position is terribly important. If we have a patient with a weak hand and weak flexors because of a painful wrist, then we do a fusion first—after testing as a preliminary step with splintage. If splintage improves