

SUMMARY

With the accumulated evidence at present available we believe that long term function, both clinical, in regard to tolerance of time in a wheelchair, and neurological, show that deformity up to a moderate degree can be accepted without fear of adversely influencing the results.

REFERENCES

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Discussion

Mr. W. KERR (*G.B.*). I should like to ask Mr. Bedbrook further details about his mention of work by Nicoll. This person's work concerns a very firm division of spinal injuries into functionally treated stable fractures, and unstable fractures which must be kept stabilised. If a patient is ambulant with no neurological damage, they can be put in a plaster jacket or spinal fusions can be performed, but only Nicoll, as far as I know, treats functionally those patients who have had a simple wedge compression of the vertebra with no displacement and certainly no damage to the posterior elements. I don't think there should be confusion with Nicoll's work and the slides that we saw of definitely unstable fractures.

Mr. T. MCSWEENEY (*G.B.*). I'd like to comment on the papers of Dr. Braakmann and Mr. Bedbrook. There may seem to be some slight conflict here. First of all I'd like to agree wholeheartedly with Dr. Braakmann in making a distinction in the occurrence of progressive neurological signs and delayed myelopathy—the distinction here between the patient who is admitted with gross neurological features and the patient who attends an orthopaedic surgeon with minimal neurological signs. I think delayed myelopathy is much commoner in the latter group. Because this might appear to conflict with the very important paper of George Bedbrook's, where, and I think I get him correctly, he would adopt a more laissez faire attitude to deformity, particularly outside the cervical spine, than Dr. Braakmann. In fact, he is so laissez faire as to be reminiscent of Lucas Champonier, who would scarcely apply a mobilisation to a fracture. Now I think, like George Bedbrook, that the functional result of the average spinal injury is better if there has been no surgical intervention. On the question of later myelopathy, I do not think that angulation at the site of injury is the source of the myelopathy, rather it is at a distance, and the deformity of the resultant myelopathy is not associated with the deformity but some other process, and that process is at distance from the site of angulation.

Dr. R. BRAAKMANN (*The Netherlands*). I would like to have some discussion with Mr. Bedbrook and Mr. McSweeney on this topic, but most people I think are waiting for lunch, and I'm getting hypoglycaemic, so I'll make no further comments.

Prof. M. WEISS (*Poland*). With agreement for everything we have heard today, I have to tell that not only the future decides on immobilisation but also conditions for the treatment. Not every one of us has enough personnel to turn these people into sure postural correction, and I do believe very much that indications for every immobilisation, surgical ones, are also related to early rehabilitation results. And I must tell you that we have for three years been using two-inch springs with very good results. These, allowing our cases to stand up within 10 days and correcting posturally and surgically this deformity appearing after the trauma.

Mr. G. BEDBROOK (*Australia*). I am afraid it would take me some hours to answer the questions. First of all, we don't adapt a *laissez faire* attitude at all towards the problems of deformity in the early stages. In fact, we are particularly careful to try and reduce the deformities in the early stages. We are simply pointing out that with the average care of a paraplegic at the lumbo-dorsal junction and certainly not in the cervico-dorsal junction, further wedging does occur, despite the method of treatment and because of the pathology.

Now, as far as this question of stability and instability is concerned, I would like to have a personal discussion with Mr. Nicoll about this, but the whole use of the terminology, stable and unstable, has I think got to change. Most fractures in fact—we would say 94 per cent.—if treated adequately are posturally stable, and I don't think there's any doubt whatsoever about that statement. There are a small number—between 6 and 8 per cent.—who are unstable at the end of a period of time. Now, I would say quite categorically that Nicolls did talk about the unstable group from the point of view of functional management. But his functional management and our functional management is perhaps slightly different. We, of course, do not treat patients in any sort of immobilisation (plaster) but in the non-paralytic we still treat them in plaster and I think that we get equally good functional results. So this whole question of pathology, stability and instability is something about which I have written quite extensively and I don't propose to make any further comments at the moment.