EDWARD GALLIE

Edward Gallie is a general surgeon; he always was a general surgeon and still is. But I still remember very clearly a luncheon in Toronto when he goaded and taunted a neurosurgeon, plastic surgeon, rectal surgeon, urogenital surgeon, upper-abdominal surgeon, orthopaedic surgeon and others to debate the merits or demerits of specialisation and generalisation. He had his tongue in his cheek; he knew that although priding himself as being a so-called "general surgeon" his first love was to that part of general surgery known as orthopaedics. Nevertheless his disciples and students now working throughout the length and breadth of Canada have the training by which, at any time, generalisation can turn into specialisation.

With great loyalty, Edward Gallie chose London to celebrate his seventy-fifth birthday where he was accompanied by nearly every member of the Gallie Club who are all his "galley-slaves." It was in London that he himself slaved hard to achieve the Fellowship of the Royal College of Surgeons of England; and his students, associates and friends from both continents joined him in London, Oxford and Edinburgh in happy social activity as well as in occasional academic pursuit. His dinner birthday party was in the oak-panelled hall of the Council Room of the Royal College of Surgeons of England, the oak tree having been planted and grown in the reign of Queen Elizabeth I, and the panelling

from it dedicated after all these years by our monarch, Queen Elizabeth II. It was in this College that Edward Gallie received its very greatest award and honour—the Gold Medal—awarded less than forty times in a century. We all thought that he went home to Toronto with much of the glow and warm happiness that we had enjoyed by being in his company.

EDITOR.

THE TREATMENT OF PERTROCHANTERIC FRACTURES

The special feature of pertrochanteric fractures is that it is mostly a problem of old age, and that the comfort of the patient, the ease of nursing and the diminution of the complications of decubitus make desirable the earliest possible freedom of movement, if not ambulation. Compared with transcervical fractures pertrochanteric fractures rarely lead to avascular necrosis, but in the latter the mechanical difficulties of shearing force are found in a much more acute form. This has not always been sufficiently recognised. In a reduced transcervical fracture held by an intramedullary nail the muscular forces applied to the trochanters have an impacting rather than a disrupting influence; but in pertrochanteric fractures the relationship is altered in favour of disruption. In the transcervical fractures the intramedullary nail is mechanically well able to deal with the forces applied; but, because a pertrochanteric fracture occurs at the end of the cervical lever and therefore at the meeting point of the extremity of shearing force with the focal point of muscular power, the position can be held only by a device that must be angular to conform with the anatomical structure and must be capable of resisting the combined forces of the weight of the attached limb (rather less than a quarter of the total body weight) and the internal motive forces of muscular activity. It is an intriguing mechanical problem. Nail or screw devices passing through the skin and attached to an external framework, while having some mechanical advantage over simple external traction methods, did very little to solve the problems of decubitus and the needs for early ambulation. The original idea of the angulated appliance or nail-plate fixed

directly upon and through the site of fracture appears to have come from Neufeld. In its original form it comprised a relatively thin piece of steel, the lower half of which was concavo-convex in section to fit the outer side of the femoral shaft and the upper half was bent at an angle and was forged into a cross-sectional V-shape. There were several early modifications, such as those of Jewett, Moore, Blount, and Capener. The last, which is commonly used in Great Britain, was designed to provide greater strength at the angular junction. Unfortunately at one time some manufacturers found it easier to make this device in two pieces welded; and so the nail-plate exhibited all too clearly the mechanical weakness engendered by the internal body forces above mentioned, and emphasised that V-nail plates must be forged out of one solid piece of metal reinforced at the angle. The accurate insertion of these one-piece angulated devices is at first not easy to the unpractised surgeon, although it is not at all difficult if a few straightforward precautions are observed. To meet this supposed difficulty, and perhaps for other reasons, many surgeons have employed two-piece devices, such as those of Thornton and McLaughlin. This appliance is a Smith-Petersen triffin nail fitted with a special locking nut which can be attached at any angle to a lateral plate fixed to the femoral shaft. Mechanically this has inherent weaknesses. It was because he had mechanical failures at the point of attachment of the three-flanged nail with the lateral plate that Kennedy of London, Ontario, began to use the Moe plate in 1945, and in this number of the Journal we publish a report by Kennedy, McFarlane and McLachlin upon 256 fractures so treated. The Moe plate is shaped to the greater trochanter, to the lateral face of which and of the femoral shaft it is fixed, and a firm hold is given to the femoral head and neck by three large lag screws which converge from the outer side of the greater trochanter. One questions whether the apparent greater ease of insertion justifies what looks like a rather massive framework, whether it provides any better mechanical control of the fracture and of intrinsic body forces, and whether the clinical results are any different from those obtained by the use of other devices.

Judged by mortality, Kennedy *et al.* say that the figure of 18.8 per cent "compares well" with rates of Evans and of Scott. Apparently, however, that is a mistaken impression of the comparison, for Evans's mortality for conservative treatment was 15 per cent and for operative treatment 10.9 per cent. Scott's figure for purely conservative treatment was 10 per cent. An assessment of post-operative mortality obtained by Evans from eight published reports of operative treatment (including his own) gave a mean mortality rate of 16.8 per cent. Statistically it is impossible to compare the published mortality rates, because the element of selection, and the time accepted as the post-operative period, are never quite the same. Evans's own criteria were strict, and it is probable that his post-operative mortality might well be regarded as less than 10.9 per cent. In a period of life when morbidity rates are high and mortality is almost a normal incident, one's belief is that operative treatment should not be too critically judged on these rates. Judged by the functional and anatomical results there is little difference between the two methods, though according to Evans there appears to be a somewhat lesser incidence of angular deformity after operation. It is, however, perhaps significant that in the paper by Kennedy *et al.* varus angulation followed the use of the Moe plate in about half the cases, though no accurate figure is given.

The major difference between conservative and operative treatment therefore seems to be in the comfort of the patient and the ease of nursing, for which no statistics can be given, except that for conservative treatment the average length of stay in hospital appears to be about fifteen weeks and for patients operated upon it is five weeks (Evans).

The paper by Kennedy, McFarlane and McLachlin is a careful and modest account of an operative method. Nevertheless if operative treatment is considered advisable, and the present writer is one who believes it is, then a rigid type of nail-plate appears to have superior merit. It should be noted, however, that compared with the report of Evans there is available no considerable study of the results following the use of the two-piece devices of Thornton or McLaughlin.

NORMAN CAPENER.