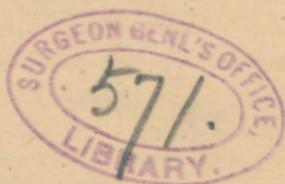


# MONKS (Geo. H.)

A case of fracture of the  
upper end of the humerus x x x x





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## A CASE OF FRACTURE OF THE UPPER END OF THE HUMERUS JUST BELOW THE TU- BEROSITIES, WITH DISLOCATION OF THE HEAD OF THE BONE INTO THE AXILLA.<sup>1</sup>

BY GEORGE H. MONKS, M.D.

A MAN of about fifty fell down stairs, striking heavily on his left shoulder. He had evidently sustained considerable injury to his shoulder, and was taken to the City Hospital at once. The external appearances about the shoulder were those of dislocation of the humerus. Ether was therefore administered by the house-officer, and an examination made. It then became evident that the head of the bone was broken off from the shaft, and displaced into the axilla, where it could easily be felt and moved about. Its fractured surface rested against the thorax. While the patient was still under ether I was sent for, and reaching the hospital soon after, I tried by manipulation to return the fragment to its proper place again, but without avail. It was therefore decided, after consultation with Dr. D. W. Cheever, to allow the man to come out of ether, in order to explain to him the exact condition of the shoulder, the necessity for operation, etc., and, after having obtained his consent, to cut down upon the head of the bone, and again attempt reduction.

<sup>1</sup> Specimen shown and case reported at the meeting of the Surgical Section of the Suffolk District Medical Society, December 4, 1895.

*presented by the author*



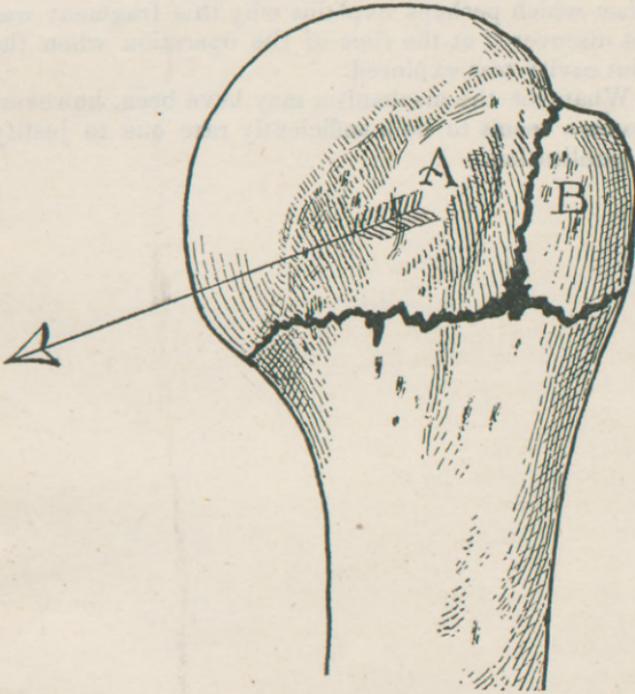
The next day, therefore, the man's consent having been obtained, ether was again given and an incision made into the axilla down to the displaced head of the bone. The fragment was freely movable, but by combined manipulation it could not be returned to the glenoid cavity. The fragment was therefore drawn out through the wound; and a tendon, which was apparently the only structure to which it was attached, was divided and the fragment removed. [This tendon, as was proved later, was that of the subscapularis muscle, a fact which explains why the head was drawn inwards into the axilla, and could not be returned to the glenoid cavity.] The forefinger was then inserted through the rent in the capsular ligament into the shoulder-joint, but no other fragment could be found — only the roughened end of the shaft. The axillary wound was then stitched with silkworm-gut. All did well for two days, when abdominal distention appeared, as well as other serious symptoms; and the man died four days after the operation.

An autopsy was made by Dr. Councilman, but the cause of death could not be determined with certainty. There was nothing about the seat of fracture to suggest a cause, and the wound in the axilla was apparently healing by first intention.

The shaft of the humerus was removed and cleaned, and *also one small fragment* (the greater tuberosity). The head of the bone, which had been excised at the operation five days previously, was then fitted to the fragments removed at the autopsy, and the specimen as a whole carefully examined. There were two main fragments in addition to the shaft. The larger fragment consisted of the rounded head of the bone and the lesser tuberosity, while the smaller fragment comprised only the greater tuberosity.

It is, of course, impossible to explain with any

certainly the way in which this combined fracture and dislocation occurred. The most probable explanation is, however, that the man's shoulder struck the ground in such a way that the bone was first fractured, and then dislocated. The head of the bone (fragment A)

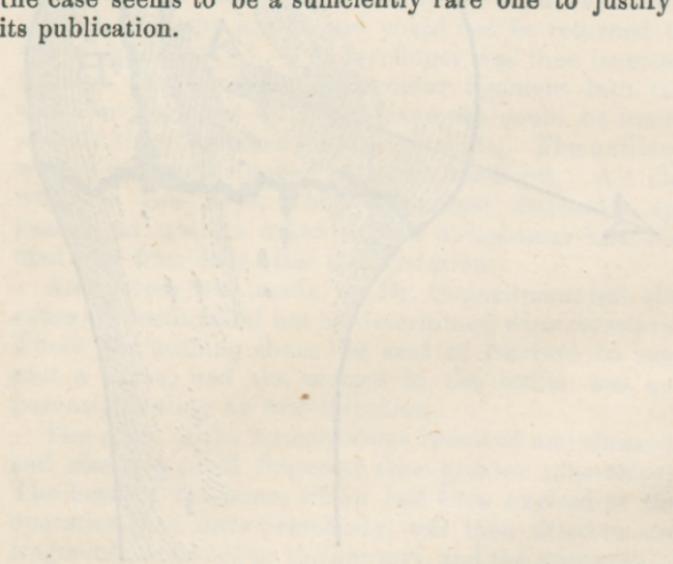


was probably driven out, through the rent in the capsule, by the shaft, after which the shaft returned to its normal position leaving the head of the bone in the axilla. The head, as already stated, could not return to the joint because of the contraction of the subscapularis muscle which was attached to it. [The arrow

indicates the direction in which this fragment was drawn by the contraction of the subscapularis.]

The greater tuberosity (fragment B) presumably did not follow the rest of the bone in its excursion into the axilla, but was probably pulled upwards and backwards by the supraspinatus, infraspinatus, etc. — a fact which perhaps explains why this fragment was not discovered at the time of the operation when the joint cavity was explored.

Whatever the mechanism may have been, however, the case seems to be a sufficiently rare one to justify its publication.



was probably driven out through the hole in the capsule by the shaft after the shaft had entered its normal position leaving the head of the bone in the axilla. The head of the shaft could not return to the joint because of the contraction of the capsule which was attached to it. [The arrow



