An endoprosthesis of the proximal portion of the femur, wherein a head and a neck are connected with a shaft by means of a threaded joint. For this purpose the proximal end of the shaft has a broadening part, wherein a seat for a threaded split shank fitted on the neck base is provided about the length of the neck axis. The split shank is fixed by a lock for the trochanter major. Accordingly, the latter lock is elongated and broadens toward the end disposed inside the shaft.

1 Claim, 2 Drawing Figures
ENDOPROSTHESIS OF THE PROXIMAL PORTION OF THE FEMUR

The present invention relates to artificial joints employed in intra-articular prosthetic replacement, and more particularly to an endoprosthesis of the proximal portion of the femur. Such an endoprosthesis may be employed both independently and as part of an artificial hip-joint to restore mobility in the hip-joint lost due to Bekhterev's disease, arthritis deformans, arthritis infectious, and aseptic necrosis of the femoral neck, as well as femoral neck fractures in the aged.

Known in the art is to employ an endoprosthesis of the proximal portion of the femur, comprising a head passing into a neck and also containing a shaft with a lock for the trochanter major.

In the known endoprosthesis the head and neck are permanently connected with the shaft. Hence, if the head is worn out or the neck is fractured, the whole endoprosthesis including the shaft must be removed.

Besides, the mentioned endoprosthesis does not provide for varying the neck length depending on the individual anatomy of different patients.

It is an object of the present invention to provide an endoprosthesis of the proximal portion of the femur, wherein the head and neck would be connected with the shaft by means of a detachable joint.

This object is accomplished by providing in an endoprosthesis of the proximal portion of the femur, comprising a head passing into a neck and a shaft wherein there is fixed a lock for the trochanter major, in which, in accordance with the present invention, the head and neck are connected with the shaft by means of a threaded joint, for which purpose the proximal end of the shaft has a broadened part, wherein a seat is provided about the axis of the neck to receive a threaded split shank fixed on the base of the neck, and the lock of the trochanter major is elongated and broadens toward the end thereof disposed inside the shaft, said lock simultaneously serving as a lock for the split shank of the neck.

The disclosed endoprosthesis of the proximal portion of the femur is advantageous in the sense that the head can be replaced, if need be, without taking the shaft from the medullary canal, and also that the neck may be elongated or shortened depending on the specific anatomy of different patients.

An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, wherein:

FIG. 1 is a general view (with cut-away segments) of an endoprosthesis of the proximal portion of the femur, in accordance with the invention;

FIG. 2 is a view of a split shank in FIG. 1 taken along the arrow A.

The endoprosthesis of the proximal portion of the femur shown in FIG. 1 comprises a head 1 passing into a neck 2 and a shaft 3 provided with fenestras 4 wherein there is disposed a lock for the trochanter major, the latter lock being formed as a screw 11, with one end thereof disposed inside the broadened part 5 being elongated and broadened. The screw 11 and the shank 8 are so disposed relative to each other that the screw 11 passing through the slit of the shank 8 serves as a lock for the shank 8, preventing the neck 2 from self-unscrewing during the service of the prosthesis.

The screw 11 is locked by two nuts 12. Besides, the broadened part 5 has an opening 13 provided for the convenience of the operating surgeon.

FIG. 2 is a view of the split shank 8 taken along the arrow A showing the shape of the slit in the shank 8.

The proposed endoprosthesis of the proximal portion of the femur is assembled in the following manner.

The neck 2 is screwed into the seat 7 (FIG. 1). The screw 11 is led into the orifice 10, narrow end first in such a way that it should pass through the slit in the shank 8. After that the screw 11 is locked with two nuts 12, in which process the screw 11 is tightened and the shank 8 is securely locked against self-unscrewing.

What is claimed is:

1. An endoprosthesis of the proximal portion of the femur, comprising a head, said head extending into a neck having a base thereon, a shaft designed for being inserted into the femoral medullary canal, said shaft having a proximal end defining a broadened part, a seat formed in said broadened part along the axis of said neck, a threaded split shank fixed on the base of said neck, a threaded joint connecting said neck with said shaft by securing said split shank into said seat, a lock for the trochanter major having one end disposed in said broadened part of said shaft, said end of said lock for the trochanter major being elongated and broadened for the purpose of locking said split shank.

* * * *

50

60

65