Technique Guide

BIOTEK®
we put life in metal

OSKAR®

Radial Head Prosthesis

1. Patient Positioning

Place the patient in the supine position. Place the arm over the chest, with a bump under the ipsilateral scapula.

2. Surgical Approach

Start at the supracondylar bony ridge and incise 6 to 8 centimeters distal to the mid portion of the radial head. Longitudinally split the extensor digitorumcommunis tendon at the middle aspect of the radial head. Incise the annular ligament and common extensor digitorumcommunis tendon.

Note:

- Extend the incision proximally if more visualization is required.
- Protect the lateral collateral ligament

3. Resection of the Radial Neck

Carefully remove bone fragments and save for implant sizing.

The radius is elevated using the radial elevator hook around the neck

Using a sagittal saw, resect the remaining radial head at the level of the radial neck fracture, perpendicular to the neck to make a smooth surface for seating the prosthetic radial head. Take care to remove only the minimum amount of resection required at neck.

4. Check the Radial head size

Reconstruct bone fragments in Radial Head Sizer. Choose the opening diameter that most closely replicates natural radial head diameter. If between sizes, choose the smaller diameter. The trial implant is finalized as per the size.

5. Preparation of the radial canal

The entry awl is introduced into the radial canal, seated and twisted through at least 90° to create the stem hole. Then the rasp is used to enlarge the tunnel.

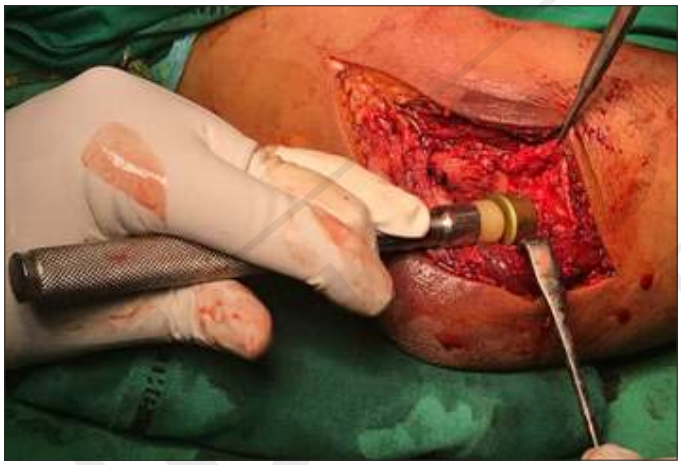
Start rasping the radial neck with smallest rasp size 1.0. Increase the rasp size one by one and rasp until the appropriate size of the stem.The rasping should not be in twisted direction as the rasp design is square-round and the final implant stem design Is square-round. Rasp in-line with the axis of the radial neck.

6. Trial Reduction

Insert the trial implant into the canal. A slight press-fit of the trial stem in the medullary canal should be achieved. Excessive compression should be avoided. The forearm is carried through all range of movements so the relationship of the implant and the capitellum is observed. If necessary, check the level on c-arm guidance

Note:

- If the radial head is fully fractured and not able to check the size, then with the hand in full supination a trial implant (Start from 1.0) is inserted, the joint is reduced and the length of the radius plus implant is evaluated. If this is satisfactory then the diameter of the head is assessed. If not, use one size more implant and check again. If still not satisfied, use one size more and so on until the satisfactory movement is achieved.
- The radial head level can also be checked against the coronoid fossa.



7. Implant Insertion

After the size of implant has been established, the implant corresponding to the final trial is selected and orientated to the same position as the final trial. The implant is gently impacted into place using the impactor. The implant is uncemented so no need to use any cement during implantation. Reduce the radiohumeral joint and put the elbow through the full range flexion, extension, pronation and supination. Verify the Implant articulates well against the capitellum.

Note: The use of extra-long radial head implant is indicated when there is a lack of bone stock at the radial neck and the distance between the capitellum and the proximal radius is too long for the Standard stem implant. The extra-long stem is cemented one so when using it, insert cement first then gently insert the final implant.

8. Closure

Perform wound closure by capsular repair. Repair the annular ligament. If the lateral collateral ligament complex was avulsed from its lateral epicondyle origin, repair it using non-absorbable No. 2 sutures or suture anchors through bone holes in the lateral epicondyle. Repair the split in the extensor digitorum communis and close the wound.

Ordering information

Catalog No.	Product Description
BOR-33.10	OSKAR® Radial Head Size 1.0, Extra Small, Uncemented
BOR-34.15	OSKAR® Radial Head Size 1.5, Small, Uncemented
BOR-35.15	OSKAR® Radial Head Size 1.5, Small Long, Cemented
BOR-36.20	OSKAR® Radial Head Size 2.0, Medium, Uncemented
BOR-37.25	OSKAR® Radial Head Size 2.5, Large, Uncemented
BOR-38.25	OSKAR® Radial Head Size 2.5, Large Long, Cemented
BOR-39.30	OSKAR® Radial Head Size 3.0, Extra Large, Uncemented

BIOTEK®
we put life in metal

BIOTEK - Chetan Meditech Pvt. Ltd.
Plot No: MD 04, Near Teva Company, Sanand GIDC Gate No. 2,
Charal Gaam, Ahmedabad-382110. Gujarat, INDIA.
Email: contact@biotekortho.com Website: www.biotekortho.com

An ISO 13485 : 2016 Company
All Implants specified in the catalogue are CE certified

ISO 13485:2016

CE

BT/ST/17, Rev:00