

# The Relationship of the Exposed Rotator Cuff Footprint and Cuff Muscle Atrophy

Department of Orthopaedic Surgery, KKR Hokuriku Hospital

Takashi Kobayashi

## Purpose

The purpose of this study is to clarify the relationship of the exposed rotator cuff footprint and cuff muscle atrophy.

## Methods

Eighty-four shoulders performed with ARCRs were evaluated, and classified into four groups according to the exposed footprint. In thirty-seven shoulders the rotator cuff were ruptured within superior facet (SF) (group SF), 17 SF and middle facet (MF) (group SF+MF), 20 minor tuberosity (MiT) and SF (group MiT+SF), 10 MiT, SF and MF (group MiT+SF+MF). Subscapularis (SSC), supraspinatus (SSP) and infraspinatus (ISP) muscle atrophy in preoperative MRI were classified by modified Goutallier's classification.

## Results

In group SF, 33 shoulders were evaluated grade 1, 4 grade2 in SSP. In group SF+MF, 6 shoulder was evaluated grade 1, 10 grade 2 in SSP, and 8 grade 1, 7 grade 2 in ISP. In group MiT+SF, 4 shoulders were evaluated grade 0, 16 over grade 1 in SSP, and 7 grade 0, 13 over grade 1 in SSC., Most of the shoulders in group MiT+SF+MF have more severe atrophy in SSP and ISP.

## Conclusion

Rotator cuff tears within superior facet read to limited SSP and ISP atrophy, these expanded to middle facet read to severer SSP and ISP atrophy. On the other hand, SSC tears dose not always reads to SSC atrophy. These revealed that ISP atrophy predict the exposure of middle facet, and concealed SSC tears combined with SSP tears are not rare without SSC atrophy.