Editorial on Hip resurfacing using highly crosslinked polyethylene: a prospective study with mean follow-up of 8.5 years

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This is an editorial on the article “Hip resurfacing using highly crosslinked polyethylene: a prospective study with mean follow-up of 8.5 years” by James W. Pritchett, MD published in Journal of Arthroplasty, March 2016.

Dr. Pritchett, an experienced surgeon, has written about hip resurfacing using annealed highly crosslinked polyethylene in a select group of patients whose femoral head size is between 40–46 mm with titanium shell of 54 mm outer diameter. The acetabular shell utilized was Trident PSL HA coated. The screw augmentation for fixation was used. The author has stated the number of times screw augmentation was needed. Their clinical results at an average follow-up of 8.5 years were good to excellent in a majority of cases with Kaplan Meier survivorship of 97%. The author should emphasize that based on past experience, male and female patients with smaller head sizes of less than 50 mm have a higher failure rate as reported in literature.

Close examination of radiographs presented in the article, shows compromised Kohler’s line which is contrary to the radiographic data presented in the paper. The CT scan cut presented shows compromised Kohler’s line as well. Also not mentioned is their indication for augmenting fixation with screws. Average 8.5-year follow-up may not be long enough to show wear related issues with the annealed highly crosslinked polyethylene including locking mechanism failures. Another limitation of surface replacement with a modified improved technique is the issue of the learning curve for the surgeon. This remains an open ended issue. Using noncemented fixation for total hip arthroplasty with highly crosslinked polyethylene annealed or melted with a 36 mm Delta ceramic head and 6 mm or thicker highly crosslinked polyethylene liner is a better option for a majority of patients at all ages.

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Footnote

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