



# Femoral component revision in complex conditions in hips with important bone loss

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**150 consecutive femoral revision arthroplasties dec.1988 - dec.1991**

Stem: Wagner  
old: (75% of cases)  
new: (25% of cases)

diam.:14-22 // lenght:

|     |                  |
|-----|------------------|
| 190 | (02.6% of cases) |
| 225 | (15.9% of cases) |
| 265 | (57.6% of cases) |
| 305 | (23.8% of cases) |

i.d. 2552

121 m. 61 m.

i.d. 6379

**Perioperative complications**

- 8 cases dislocations (4.3%)
- 3 deep venous thrombosis (1.9%)
- 2 sciatic nerve palsy (1.3%)
- 1 intraoperative femoral fracture (0.6%)

f. up 72 m.

**RADIOGRAPHICAL ANALYSIS**  
81 Cases (Survey Dec. 88 - Dec. 91)  
Average Follow Up 101 M.

**PREVIOUS STEM cemented 72.85% cementless 27.15%**

i.d. 1831

**Bone loss and previous surgery**

|             |        |
|-------------|--------|
| 1 REVISION  | 54,3 % |
| 2 REVISIONS | 31,7 % |
| 3 REVISIONS | 11,9 % |
| 4 REVISIONS | 1,9 %  |

**Revolution in surgical technique and it's evolution**

Transfemoral Approach Reaming

**Fractured Bone**

- Inhibin-like growth factor
- Transforming growth factor
- Fibroblast growth factor
- Platelet-derived growth factor
- Interleukin-1
- Tumor necrosis factor- $\alpha$
- Osteogenin
- Bone morphogenetic protein

**Remnant fragments**

**Material**

**Shape**



i.d. 6010

**Bone recovering**

Post-op F-up 1 m. F-up 6 m.

**Improved offset and CCD angle**

**I. B. D. Implant Bone Demarcation**

|                    |          |                    |          |
|--------------------|----------|--------------------|----------|
| NONE               | 49 Cases | LOW GRADE 2 zones  | 14 Cases |
| LOW GRADE 1 zone   | 09 Cases | LOW GRADE 3 zones  | 04 Cases |
| HIGH GRADE 4 zones | 4 Cases  | HIGH GRADE 5 zones | 2 Cases  |
| COMPLETE 7 zones   | 1 Cases  |                    |          |

i.d. 7072

37 m.

**Subsidence**

|         |        |
|---------|--------|
| 2 CASES | > 5 mm |
| 7 CASES | 3-5 mm |
| 72 CASE | 0-3 mm |

i.d. 6806

91 m.

**32.6% proximal and mid stem GAP filling**

**27.5% bone quality improvement (espec. medial column)**

**33.6% evidence of distal E.B.D.**

i.d. 5742

105 m.

**Conclusions**

- Result are good for both clinical and radiographic aspects
- Few difficulties and complication in Surgical Techniques were related to:
  - learning curve
  - valgus CCD angle

i.d. 3309

143 m.



**Introduction**

T.H.A. revisions are constantly increasing; and it's known that bone defects - especially if severe like in rirrevision cases - are the main problem to manage during the revision surgery. Since 1988, we have chosen to bypass the bone defects by using an "elastic" non-invasive tapered stem (SL Wagner); morsel bone graft is rarely necessary, we never use a massive one. According to our philosophy in revising, stability should be obtained by a diaphysary anchorage as proximal as possible.

**Methods:**

Our research concerns 150 cases of SL revision stems implanted from December '88 to December '91. The average age is 67 years old, complete clinical evaluation and survivorship analysis for the entire study cohort was performed from 8 to 12 years follow-up, radiographic analysis in 81 cases with 101 months avg. follow-up (min. 60 - max. 143).

**Results and discussion**

4 cases required rirrevision; 20 patients deceased; 12 were lost to follow-up; 96 examined. Clinical evaluations show an average score of 78 (acc. to HHS); 82,3 percent of patients are pain free, while slight pain still persists in a 13,7 percent pain in a 3,9 percent.

The radiographic analysis has put into evidence only 1 case of mobilization, and suffering bone in 4 percent of cases; by contrast, 79,5 percent show astonishing endosteal bone formation.

**S. CORONA HOSPITAL Pietra L. (SV) - ITALY**

**Revision total hip arthroplasty (Survey 1989-2003)**

**Our experience: 982 Wagner implanted out of 3587 revisions**

**Prognosis of Total Hip Replacement**

Update of Results and Risk-Ratio Analysis for Revision and Re-revision from the Swedish National Hip Arthroplasty Register (1979-2006).

**Revision of Stem by Year of Revision 1979-2000**

**Use of stem components in revisions (Survey 1989-2003)**