29. ESWT for Non-Union Fractures - Economic Aspects

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Introduction: Incidence of non-unions in Austria:

Between 2005 and 2009 a total of 224,749 fractures were documented in all 7 AUVA Trauma Centres in Austria. During the same time period, 5,706 non-unions were registered. This indicates that 2.53% of fractures develop into a non-union. Throughout Austria 400,000 fractures are reported annually, thus approximately 10,000 non-unions per year are to be expected.

Methods:

Traditional Therapy:

Data from health insurance companies show that surgical treatment of non-unions is successful in 68% of patients after one surgical procedure, in 23% after two and in 7% after three. While the remaining 2% of non-unions end in amputation.

Shockwave therapy:

Based upon our experience, 70% of non-unions are suitable for ESWT (i.e. 7,000 patients per year).

Results: The estimated cost of one surgical procedure for a non-union is at least 10,000., thus surgical treatment of all non-unions in Austria burdens the health care system by approximately 100 MIO per year. If the 7,000 suitable patients were offered ESWT, 75% could expect bony healing. Calculated at 1,000 per ESWT treatment, the total cost to heal 5,250 patients (75% of 7,000) would be 8.75 MIO. The remaining 25% would require surgical treatment at a total cost of 25 MIO.

Discussion: Based upon these estimates, more than 66 MIO per year could be saved in Austria by treating all suitable non-unions with ESWT. This is in addition to the cost savings from shorter rehabilitation time and less sick leave, which are not included in this calculation.

Conclusion: As recently published peer reviewed articles prove, ESWT is as efficient as surgery but with less complications and shorter rehabilitation time; therefore it is perplexing why less than 1% of non-unions in Europe receive this treatment option.