

Kołodziejczyk K, Czubak-Wrzosek M, Kwiatkowska M, Czubak J. Hip dysplasia in adolescence: osteotomy in childhood improves the results of periacetabular osteotomy in adolescents and young adults: a prospective study. *Bone Joint J.* 2022;104-B(7):775-780.

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Authors' reply:

Sir,

We thank Dr Regmi and colleagues for their interesting and valuable comments on our manuscript.¹ In response to their questions:

1. Five of the 20 patients (one boy, four girls) in Group B had multiple surgical procedures. The sequence and type of surgery were osteotomy by Dega and osteotomy by Salter. These procedures were carried out at other hospitals at different ages and by different operators. We only have data on this from clinical interviews with the parents of the adolescents. This table presents the detailed mean radiological measurements for these patients.

	CEA 0	CEA 1	Med 0	Med 1	Dist 0	Dist 1	FHC 0	FHC 1	I-IA 0	I-IA 1
♂1	6.0	26.1	80	77	57.5	51	60	74	84.5	81
♀1	5.5	24.3	79	76.5	57	52.5	58.5	76	85.5	80
♀2	6.0	23.9	78.5	78	55.5	50	59	76.5	85	79
♀3	5.5	25.8	81	77.5	57	51	60.5	74.5	86	80.5
♀4	6.5	26.2	79	78	56	50.5	58	75	84	80

2. The detailed distribution of complications by group is as follows:

A: Minor: two neurapraxias of the anterolateral cutaneous nerve of the thigh; one discomfort over the screws in a thin patient. Major: none;

B: Minor: one scarring; one neurapraxia of the anterolateral cutaneous nerve of the thigh. Major: none;

C: Minor: three neurapraxias of the anterolateral cutaneous nerve of the thigh; one discomfort over the screws in a thin patient; one scarring. Major: two periarticular ossification;

D: Minor: none. Major: none.

3. The results of radiological and clinical measurements before and after periacetabular osteotomy (PAO) in the group were the subject of internal statistical analysis. As stated in the text, normal distribution was evaluated using the Shapiro-Wilk test. For parameters with a normal distribution, we used the paired *t*-test, and for parameters with an abnormal distribution, we used the Wilcoxon signed-rank test. Groups A, B, C, and D were not compared with each other statistically due to the different sizes of the groups. Only differences in results within the groups were analyzed and presented. We are aware that reporting the results of the largest/smallest difference from the control group without a statistical test does not add to the existing literature, but we had to work on a very small group of patients. This article is part of our research and observations on measuring the configuration of the dysplastic hip. The research was conducted as part of the first author's doctoral studies.

Regarding the statistical instrument used, the paired *t*-test, we agree with the readers' opinion about the adequacy of using an unpaired *t*-test. However, the use of the unpaired *t*-test also indicates the statistical significance of the difference in the outcome before and after PAO surgery within the group.

The most important and relevant information from the study is to know numerically (in millimetres and degrees) by how much the anatomy of the dysplastic hip joint has been improved and at what stage of treatment (without previous surgical treatment or after previous surgical treatment). The differences in the measurements obtained are very small, i.e. a few millimetres or degrees. However, the results give some idea about the surgical treatment of dysplastic hip joints which have and have not been previously operated upon. We mainly focused on determining in which group we would obtain postoperative PAO radiological measurements closest to healthy hips, and in which group we would achieve the greatest improvement (difference) in radiological measurements after PAO.

We would like to thank Dr Regmi and colleagues for their valuable comments on our article which will help us avoid errors during our further research.

We hope that we have been able to answer all their questions satisfactorily and clarify the issues raised.

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1. **Kołodziejczyk K, Czubak-Wrzosek M, Kwiatkowska M, Czubak J.** Hip dysplasia in adolescence: osteotomy in childhood improves the results of periacetabular osteotomy in adolescents and young adults: a prospective study. *Bone Joint J.* 2022;104-B(7):775-780.

Conflicts of Interest: None