Evaluation of Clitoral Sensitivity and Viability Following a Modified Reduction Clitoroplasty in 21 Patients

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nlargement of the clitoris is a prominent manifestation of virilizing congenital adrenal hyperplasia (CAH) and other disorders resulting in ambiguous genitalia. Controversy persists as to the viability and sensitivity of the clitoris following reduction clitoroplasty. To date, no single large group study using a single technique has been evaluated for post-surgical clitoral viability and sensitivity. We report on a modified technique for reduction clitoroplasty based on the understanding of the female clitoral anatomy that results in exceptional cosmetic appearance while providing reliable viability and sensation. Our group evaluated 22 patients who underwent reduction clitoroplasty from 1996 to 2002 using the same technique by a single surgeon. The youngest patient was 5 months and the oldest 24 years with a mean age of 6 years. Eighteen patients had CAH. One patient was a 46 XX true hermaphrodite and two patients were 46 XY and underwent sex

reassignment surgery. Simple modifications to the conventional technique included: total mobilization of the neurovascular bundles (NVB) through parallel ventral midline incisions of Buck's fascia, no reduction or excision of the glans clitoris, irrigation of the NVB with papaverine and subtotal excision of the corpus cavernosal tissue. All patients were evaluated post-operatively for clitoral viability by gross examination and capillary perfusion testing. Of the 22 patients, 8 patients were above 5 years of age and considered candidates for clitoral sensory testing (CST). CST was performed using a cotton-tip stimulator. On a scale of 0 to 5, the patient was asked to report the degree of sensation at various points of the genitalia and inner thigh. Mean follow-up time of these patients was 2 years. Our results in the 22 patients that underwent reduction clitoroplasty have been tremendous. No postoperative complications

have been reported. All patients were confirmed to have a viable clitoris with normal capillary perfusion. Of the 8 patients that were evaluated with CST, all reported a degree of sensation of 3/5 at the inner thighs, 4/5 at the labia minora and 5/5 at the clitoris. These results suggest that the modified reduction clitoroplasty provides a safe, reliable approach to managing the enlarged clitoris. The positive viability and sensation outcomes in the older patients suggest this technique will be successful in the younger children undergoing the procedure. This data supports the belief that clitoral reconstructive surgery using this technique does not result in loss of sensation or viability. Continued long-term evaluation of our patients remains an important focus for our group. We are grateful to our patients and their parents for the continued enthusiasm and shared interest in this work.

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