

Reply to Letter to the Editor: V. Iaccharino. A Proposed Anatomical Typing of the Right Internal Spermatic Vein: Importance for Percutaneous Sclerotherapy of Varicocele (CVIR 30[2]:347, 2007)

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We commend Dr. Iaccharino on his extensive experience with treating varicocele. We agree that sclerotherapy is the most effective way of treating the main internal spermatic vein (ISV) and assuring that the ever-present collaterals are also sclerosed, reducing recurrences. Retrograde (transcatheter) transfemoral sclerotherapy in experienced hands is both safe and efficacious, with none of the theoretical complications suggested by Dr. Iaccharino. We do not heparinize our patients, who are mobilized within 30 min of the completion of their treatment and told not to lie in bed after the first 4 h. We have seen no cases of clinical symptoms of thromboembolism, either systemic or portal. (We are somewhat surprised at such a case: Does Dr. Iaccharino have one?) It might be expected in esophageal varices sclerotherapy, but the amounts of sclerosant that we use and the sclerosing characteristics of 3% sodium tetradecyl sulfate are such that this is not a consideration. We disagree with Dr. Iaccharino about the treatment of so-called subclinical varicocele. We have shown in several of our articles that the physical (hydrodynamic) principles which explain the pathophysiology of varicocele require only that there be incompetent ISV valves for the abnormally high venous pressures to be directly transmitted to the testicular microcirculation and interfere with normal perfusion of the testicular parenchyma. The result is hypoxia of the testicular tissue and this has been shown on histopathology of

varicocele (also cited in our articles in the References section of our original paper: *CVIR*, Vol. 29, No. 2, 192–197, 2006).

The presence of varicocele on the right cannot be reliably demonstrated clinically by Valsalva maneuver because of the hydrodynamics of the right ISV: specifically, its direct emptying into the inferior vena cava (IVC). It is not possible to adequately distend the IVC during Valsalva and elevate pressures for a prolonged time without nearly arresting venous return to the heart and causing very rapid syncope. At the same time, the angle between the ISV and the IVC is acute, and the changes in the relationship between these two venous structures during Valsalva maneuver act to close that angle and decrease flow. Only in those patients with direct emptying of the right ISV into the right renal vein (about 8% in our study), in which the configuration nearly mirrors the left anatomy, can this maneuver be relied on to result in reflux. And again, reflux does not have to be massive (as Dr. Iaccharino proposes) for it to cause infertility. We have (as have others using microsurgical techniques) shown a small but significant group of responders to bilateral sclerotherapy in patients with Sertoli cell only. Dr. Iaccharino cites Dr. Nagler's comments in the *Journal of Urology* (2004), in which he questions whether treatment is at all effective. This is in keeping with the multicenter study which showed poor results for ISV occlusions—surgical and interventional techniques. Our response to Dr. Nagler was that we agree that the treatment of varicocele as described by the various authorities was not effective (more than medical treatment), but not because varicocele does not affect fertility: rather, because the treatments were essentially inadequate, ignoring the physical basis for the pathophysiology and the presence of significant venous reflux on the right, not just by interscrotal collaterals.

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