



Fig. 3. (A) Emissary vein at the transition (arrow). Note the twin tunnels in 1 chamber of the emissary vein at the subtunical level. Thus more than 2 smaller veins coalesce here from the sinusoids ($\times 7$). The deep dorsal vein (DDV), cavernosal vein (white heart), and dorsal artery (white asterisk) are arrayed. (B) Elastic fibers (arrow) in the arterial wall which is muscular and marked in between the asterisks ($\times 50$, Masson trichrome stain). The view is focused on the elastic fiber at the expense of poor visibility of other tissue. (C) The wall of the deep dorsal vein ($\times 100$, PAS stain). Note the conspicuous elastic fibers and venous valve.

early or late phase of cavernosography, it was never seen using spongiosography. The pattern of distribution of the deep dorsal vein, ascertained in our cadaveric dissection, varied: parallel (train-tracks), Y-shaped, or an inverted Y (Fig. 2). On 3 occasions during cadaveric dissection an emissary vein was seen at the transition between the inner circular and outer longitudinal layers (Fig. 3). It was not unusual to see twin tunnels in 1 venous chamber. This denotes that the veins take an oblique longer course to penetrate the tunica albuginea.

The Table 1 summarizes the venous data of the 9 cadavers. The circumference of the corpora cavernosa ranged from 4.72 to 7.06 cm, that the deep dorsal vein from 0.6 to 1.3 cm, and that of the cavernosal vein from 0.2 to 0.75 cm. Interestingly, if the ratio of circumference was less than 25.4%, then the para-arterial veins, found in all, were conspicuous. The ratio between the length of the cavernosal vein and that of the deep dorsal vein was more than 59% in 7 cadavers, but less than 40% in 2; thus, 77.8% (7/9) of the cadavers had a long cavernosal vein. Indeed, as shown schematically in Fig. 4, in 7 of 9 cadavers, a cavernosal vein was found coursing along each corpus cavernosum almost distal to the glans, rather than merely comprising a short segment at the penile hilum. It was located between the dorsal artery and deep dorsal vein, but lied below the level of the deep dorsal vein (Fig. 4A), resting intimately on the tunica albuginea and receiving direct emissary drainage. In 3 cadavers, the deep dorsal veins were confluent proximally. In 6 cadavers, the cavernosal veins represented independent drainage directly to Santorini's plexus (Fig. 4B). As the table shows, both the size and course of the cavernosal vein were asymmetrical: in 8, the left cavernosal vein predominated and ran in a straight course, whereas its fellow assumed a zigzag course and smaller size. In all cadavers, 2 sets of para-arterial veins were found sandwiching the dorsal artery. These were prominent distally, where the medial one received emissary drainage from the corresponding corpus cavernosum, and the lateral one was found occasionally ($n = 7$) to have its own circumflex vein from the corpus spongiosum. Three cadavers showed independent drainage proximally, coursing into Santorini plexus. However