

6.2.1.1 Indications of "cold knife" direct vision internal urethrotomy

6.2.1.1.1 Direct vision internal urethrotomy for primary stricture treatment

In the only high-level evidence study, Steenkamp *et al.*, randomised 210 patients with seemingly comparable non-obliterative strictures at all locations of the urethra to either filiform dilatation vs. DVIU with local anaesthesia on an outpatient basis [196]. They collected objective data with RUG performed at seven follow-up visits (3, 6, 9, 12, 24, 36 and 48 months). This unique study showed that urethral dilatation is equally effective as DVIU but both procedure modalities become less effective with increasing stricture length (see section 6.2.1.1.3.1).

A retrospective cohort series on the primary treatment of patients with iatrogenic urethral strictures reported a significantly poorer patency rate for DVIU compared to urethroplasty techniques (32.2 versus 82.4-83.5%) [197].

Patency rates vary considerably between 8% and 77% after DVIU (predominantly without prior urethroplasty) in retrospective cohort studies with minimum follow-up of one year [67, 198-204] (Table 6.1). Median time to recurrence was less than twelve months in most series [67, 198-202]. This large variation in patency rate can be in part explained by the heterogeneous nature of the strictures and various definitions of patency used by the authors in these series. Indication to perform DVIU is dependent on various stricture characteristics that are prognostic for a successful outcome.

Table 6.1: Results of DVIU in series with minimum follow-up > 12 months

Study	N	Age (years)	Follow-up (months)	Location	Length (cm)	Previous interventions	TTR (months)	Patency rate (%)
Al Taweel <i>et al.</i> [200]	301	37 (range: 17-82)	36	Bulbar: 227 (75%)	1.3 (0.4-4.2)	Primary: 47%	10	8.3
				Penile: 50 (17%)		Recurrent: 53%	-	-
				Penobulbar: 24 (8%)				
Barbagli <i>et al.</i> [199]	136	37 (IQR: 25-48)	55 (range: 36-92)	Bulbar: 100%	1-2 cm: 45%	Primary: 100%	25	57
					2-3 cm: 40%			
					3-4 cm: 15%			
Kluth <i>et al.</i> [198]	128	64 (SD: 16)	16 (IQR: 6-43)	Penile: 15 (12)	NR	Primary: 66%	8	52
				Bulbar: 112 (88)		Recurrent: 34%	-	-
				Unknown: 1 (1%)				
Pal <i>et al.</i> [201]	186	39 (SD: 15)	1 st DVIU: 58 (SD: 15)	bulbar: 100%	NR	Primary: 69%	8.5	1 st DVIU: 30
			2 nd DVIU: 56 (SD: 15)			Repeat: 31%	-	2 nd DVIU: 23
			3 rd DVIU: 45 (SD: 15)					3 rd DVIU: 13
Launonen <i>et al.</i> [202]	34	6 (range: 0-16)	79 (range: 7-209)	Bulbar: 74%	≤ 2 cm: 85%	Primary: 100%	4	26%
				Penile: 21%	> 2 cm: 15%			
				Penobubar: 6%	-			
Redon-Galvez <i>et al.</i> [203]	67	57 (range: 15-91)	40 (range: 12-120)	Penile: 9%	≤ 1 cm: 82%	Primary: 90%	< 24	63%
				Bulbar: 64%	> 1 cm: 18%	Repeat: 10%	-	-
				VUA: 21%				
Güler Y. [197]	234	57 (range: 22-74)	47 (range: 24-56)	Penile: 34%	2.5 (0.4-5)	Primary: 100%	-	34%
				Bulbar: 59%				30%
				Membranous: 6%				33%
Harraz <i>et al.</i> [204]	430	50 (SD: 15)	29 (range: 3-132)	Bulbar: 100%	< 2 cm	NR, prior urethroplasty excluded	NR	58%