

TESTICULAR VOLUME OF DOWN'S PATIENTS

by L. HORVÁTH and J. BUDAY

Maternity Care Center, Budapest, Hungary; Training College for Teachers of Handicapped Children, Budapest, Hungary

Abstract: 24 index patients were examined by means of SZONDI's testometer and phantom. The mean value of bilateral testicular sum was 13.5 ml. (SD = ± 5.3). No significant correlation was found with age ($\bar{x} = 24.9$; SD = ± 5.2), body height ($\bar{x} = \pm 156$ cm; SD = ± 5.4) and body weight ($\bar{x} = \pm 56.9$ kg; SD = ± 8.3).

The data mentioned mean that the Down male patients are characterized by a significant testicular hypotrophy which is realized in their under-developed sexual life.

Key words: testicular volume, Down male patients.

First of all we have to say some words about the characteristics of the Down syndrome. LANGDON DOWN physician in London was the first who published the features of this illness in 1866. It was so well characterized in the above mentioned paper that we could not do better. It is a well known fact that the so called "mongolism" is not suitable for the diagnosis, therefore we use — as in general — the name of "Down-syndrome".

The Down syndrome as a worldwide well known chromosomal mutation is characterized by a genetic material surplus concerning the 21th chromosome. Whether trisomy or translocation is showed by karyotyping the clinical signs are just the same.

The following obligatory symptoms are to be mentioned: mongolid eyelids, microcephaly, oligophreny, mesenchymosis, muscular hypotony, ectodermal disorders (dermatoglyphic features).

Our knowledge about the sexual organs and the sexual life of the Down patients is very limited. Whereas the details about the fertility of Down females are well-known, no data concerning the fatherhood of Down males have been published. Only a few publications deal with the fertility of adult males suffering from Down syndrome (RUNDLE et al. 1959, STEARNS et al. 1960, HORVÁTH 1978).

Although the scientific attitude in this regard is uncertain — in general the specialists are convinced that the Down males are infertile.

25 adult Down males were examined. Mean age was 24.9 years (min.: 18, max.: 35 y.). The testicular volume was estimated by means of SZONDI's testometer and phantom. The mean value of bilateral summarized testicular volume was 13.5 ml (SD = ± 5.3). Comparing this value with the summarised bilateral testicular volume of fertile non Down men, which is 31.91 ml (SD = ± 9.89), we can observe a high significant difference. On the other hand,

Table 1
Somatic data of Down patients

No.	Name	Age (years)	Height (cm)	Weight (kg)	Testis volumen ml	Sperm volumen	M/ml	IF*
1.	B.J.	24	158.6	50.4	20	—	—	—
2.	G.K.	28	158.9	58.0	20	—	—	—
3.	H.G.	20	158.0	58.5	10	0.5	1	0.5
4.	H.I.	21	159.2	56.6	—	—	—	—
5.	H.J.	31	169.0	75.0	24	0.5	80	20
6.	K.A.	20	158.0	56.0	18	1.0	5	2.0
7.	K.K.	26	155.0	53.0	12	0.5	25	8.7
8.	L.L.	31	157.2	62.0	10	—	—	—
9.	L.L.	18	150.6	50.5	25	—	—	—
10.	M.J.	18	155.8	52.1	10	—	—	—
11.	N.A.	19	151.0	58.0	8	—	—	—
12.	N.J.	21	154.5	50.6	20	—	—	—
13.	N.Z.	24	141.0	54.5	16	0.5	10	3
14.	P.I.	25	161.3	48.0	16	—	—	—
15.	P.L.	27	154.0	42.0	10	—	—	—
16.	P.O.	35	148.0	75.0	10	0.3	0.001	0
17.	S.F.	30	155.0	54.0	20	0.2	40	5.6
18.	S.G.	19	152.0	47.0	10	0.5	1	0.02
19.	S.L.	31	156.4	60.8	10	—	—	—
20.	S.L.	35	149.0	53.0	20	—	—	—
21.	Sz.Gy.	31	156.3	57.5	10	—	—	—
22.	T.L.	23	158.0	55.5	14	—	—	—
23.	V.A.	33	156.0	64.9	15	—	—	—
24.	V.J.	23	164.3	69.9	20	—	—	—
\bar{x}	—	24.9	156.0	56.9	13.5	0.438	20.25	5.046

* IF = Index of fertility (FARRIS)

no significant correlation was found with age ($\bar{x} = 24.9$; $SD = \pm 5.2$), body height ($\bar{x} = 156$ cm; $SD = \pm 5.4$), and body weight ($\bar{x} = 56.9$ kg; $SD = \pm 8.3$) (Table 1).

The data mentioned mean that the Down male patients are characterized by a significant testicular hypotrophy which is realized in their under-developed sexual life.

Only 8 patients were able to deplete sperm (Table 2). The 5-day period of abstinence was assured. The characteristics of the investigated sperms were as follows:

1. HYPOPOSY. The mean quantity of the depleted sperm was 0.5 ml (min.: 0.3 ml, max.: 1.0 ml).

2. OLIGOZOOSPERMIA. The mean cell density was 20 million/ml (min.: 0.001 million/ml, max.: 80 million/ml).

3. pH mean value = 8.32 (!).

The characteristics of the sexual behaviour were (1) low libido, and (2) inhibition from and/or lack of motivation for searching a sexual partner.

In view of these characteristics the present study revealed that adult Down males are practically infertile.

Table 2
Spermatologic data of Down patients

No.	Liquefaction (min)	pH ⁺	Motion %	Speed	Motion % after 60'	Character of propulsion	Qualitative					
							young	norm.	head	neck	tail	old
3.	10	8.1	100	3-4	0 0	Suitable	—	50	50	—	—	—
5.	20	8.1	50	3-4	10 1-2	Suitable agglut. (H-H; T-T)	—	80	14	2	2	2
6.	10	7.8	50	1-2	0 0	Asthenospermia	—	30	58	4	4	4
7.	10	8.1	70	1-2-3-4	20 1-2	Shaking 10% suitable	2	50	30	4	2	12
13.	10	8.7	60	1-2-3	60 1-2	Shaking meandering	2	42	46	2	6	2
16.	10	8.1	0	—	—	Necrospermia	—	—	—	—	—	—
17.	10	8.7	70	3-4	50 1-2	Suitable	3	41	35	10	8	3
18.	10	9	40	1-2	40 1-2	Asthenospermia	—	32	42	10	6	10
\bar{x}		8.3										

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Authors' addresses: DR. HORVÁTH LÁSZLÓ
 Knézich utca 14.
 Budapest
 H-1092, Hungary

DR. BUDAY JÓZSEF
 Bethlen tér 2.
 Budapest
 H-1071, Hungary

