

Author(s): M.B.Lazarevski

Institution, city, country Department of Gynecology and Obstetrics, Medical Faculty, University "Sts Cyril and Methodius", Skopje, R. Macedonia.

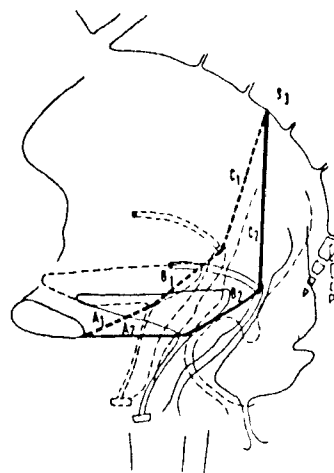
Title (type in CAPITAL LETTERS, leave one blank line before the text) PELVIMETRIC STUDY OF THE SUSPENSION SYSTEM CHANGES IN GENITAL PROLAPSES

Aim of study In order to investigate the changes of the suspension system of pelvic organs with genital prolapses, a pelvimetric study on the colpocystographic radios, followed by a biomechanical analysis of the obtained data, is carried out

Methods. The material encompasses 340 genital prolapses and 136 control cases (patients without genital prolapse, different age) subjected to colpocystography: first position (contraction of the pelvic diaphragm) and second position (maximum bearing down). Very well evident markers of pelvic bone system and pelvic organs are arbitrarily selected, permitting satisfactory pelvimetric measurements (Fig 1).

Fig.1 Scheme of the pelvic suspension system in I (dotted line) and in II position (full line):

- A1,A2 Pubo-urinary distance;
- B1,B2 Genito-urinary distance;
- C1,C2 Genito-sacral distance



Results. Biomechanic analysis of the suspension system by study of indices of elastic oscillations and plastic deformations of the investigated parameters demonstrates that its each element shows different deterioration, characteristic for each prolapse element. Such a finding allowed to elaborate a theory called "Theory of the weakest link of the suspension system". Namely, deterioration of the weakest link of the suspension determines the development of each prolapse element.

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Remarkable elasticity of all parts of the suspension system in control cases opposes to the classic conceptions that its sacro-genital part represents a rigid element, permitting only the pendulum-like movements.

Specific schemes for each prolapse elements throw another light to the prolapse pathogenesis and are very interesting to be presented. In this way, the spatial demonstration of the suspension system changes with hysteroprolapses in second colpocystographic position is presented on Fig.2. Progressive elongation of the sacro-genital part is more evident than of the pubo-urinary part, contrary to very small elongation of the genito-urinary part of the suspension system.

For metric demonstration, the indices of plastic deformation in maximum hysteroprolapses compared to controls show that the sacro-genital part is 100% elongated, the pubo-urinary – 50%, but the genito-urinary – of 33%, only.

Fig 2. Spatial demonstration of
The suspension system changes
with hysteroprolapses – II position.

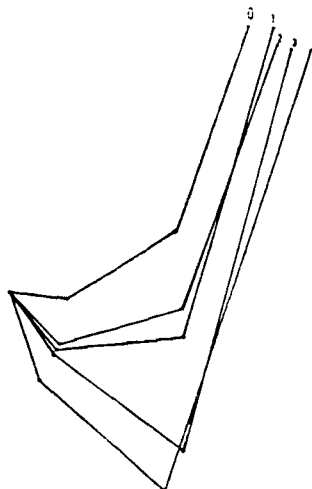
0 – Control cases

1 – Hysteroptoses till 30mm

2 – Hysteroptoses over 31mm

3 – Hysteroceles subtotal

4 – Hysteroceles total



Furthermore, from the Fig.2, the directions of the bladder neck and the external uterine orifice during processes of the descent are interesting to be noted.

Conclusion. Pelvimetric measurements of the suspension system of the pelvic organs clearly demonstrate that its each element exhibits different deterioration, characteristic to every specific element of the genital prolapse - or, the changes of the suspension system determine the development of each prolapse element. Consequently, conclusion could be drawn that role of the suspension pelvic system is preponderant to that of the sustentation system – the later could only quantify the intensity of changes.

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