Hypothesis of "Window Effects" May Reveal Mechanisms of Groin Hernia Formation and Development

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Many patients who experience a common discomfort of bulging when they return to work involving heavy lifting or extended periods of walking or standing or trying to strengthen abdominal wall after inguinal hernia repair with plug or mesh do always complaint about the sensation, which also make hernia specialist feel discouraging and push them into a very dilemma situation. It appears to contribute to disadvantage of conical mesh plug or unskillful mesh fixation or both of them according to recent study [1-3].

Herein, Authors would like to propose a hypothesis of "window effect" to clarify the symptom of bulging.

The hypothesis reveals how abdominal pressure break through damaged transversals fascia and provide a high-quality technique to block the loophole of primary groin hernia or recurrent hernia after surgery. Obviously, the increasing "window effect" has been linked the formation and development of groin hernia. Previous works have confirmed our idea with Hernia Sac Top (HST) approach. That also means majority of inner orifice could be totally exposed, and then the orifice could be sutured meticulously with 3-D herniorrhaphy. Therefore, how to stop "window effect" should prefer to close the inner orifice rather than block it or narrow the ring. Our works have achieve a better outcomes (higher-degree resistant, less discomfort of bulging. The initial results suggest that the inner orifice-closing is of crucial importance. Based on the theory, minimal invasive herniorrhaphy is now ongoing to develop a self-extended mesh (National Innovation Patent, China Patent Number:201410649063X) that can target at going through very small inner orifice during surgery or performing hernia repair with ultrasound-guided interventional techniques without surgery in the future.

The theory of “window effect” is following in Bassini’s foot steps, will help us to understand current problems, and also aid to improve inguinal hernia repair.

Competing Interests

The authors declare that they have no competing interests.

Authors Contributions

Zhong Jia found the phenomenon of "window effect" in surgical practice, and confirmed his hypothesis with HST approach. Ya-Feng Wan and Meng-Yao Luo, do great help to submit the letter.

References

