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LETTER TO THE EDITOR

Reply to the letter to the editor concerning "Close relationship between the short round ligament and the ovarian prolapsed inguinal hernia in female infants"

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We greatly appreciate Prof. Hutson for their review and interest in our work [1].

First, our research is based on the findings from the abdominal cavity during laparoscopic hernia surgery. Therefore, we did not evaluate the caudal side of the round ligament. We understand what Prof. Hutson pointed out based on their research; the caudal attachment of the round ligament is just outside the external inguinal ring in female infants with no hernia. Their explanation means that the caudal attachment of the round ligament deviates caudally during the development of an inguinal hernia and the whole length of the round ligament is the same with both of hernia and non-hernia side.

However, we think that our data are inconsistent with the above explanation in the following points.

- The onset age of an inguinal hernia varies, and it is not rare that occur in older children. If the caudal attachment of the round ligament was displaced caudally and the length of the round ligament was equal in both hernia and non-hernia sides in the older children, the intra-abdominal part of the round ligament in hernia side should be shorter than the non-hernia side. In our research, the length of the round ligament showed no difference in older children.
- In our research, the intra-abdominal side of the round ligament with patent PV was shorter than that with closed PV. If the round ligament deviated caudally when the patent PV developed to an inguinal hernia, the length of the round ligament with either patent PV or closed PV should be the same.
- The picture attached below shows the intra-abdominal view of an infant with right inguinal hernia and left closed PV. Figure 1 shows that right round ligament is extremely short and the left side looks normal. If the difference of round ligament length derived from its attachment beyond the external inguinal ring, the length of hernia sac beyond the external inguinal ring should be longer than 2 cm. We did not measure the distance of the hernia length, but we do not think that the round ligament extends caudally about 2 cm in average from the external inguinal ring with considering the hernia size of infants.

From our explanation mentioned above, we concluded that the round ligament with the hernia side was shorter than that with closed PV in infants. The short round ligament in the abdominal cavity causes the ovary sitting close to the hernia orifice resulting in ovarian prolapsed hernia.

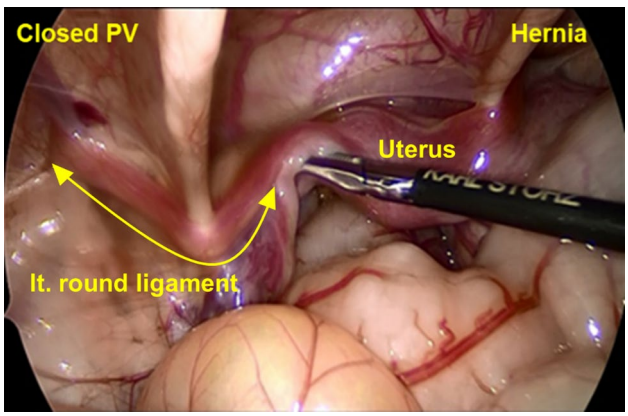

Fig. 1 The intra-abdominal view of an infant with right inguinal hernia and left closed PV. Yellow arrows and line: the intra-abdominal part of the left round ligament

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Reference

1. Kuyama H, Uemura S, Yoshida A et al (2019) Close relationship between the short round ligament and the ovarian prolapsed inguinal hernia in female infants. Pediatr Surg Int 35:625. https://doi.org/10.1007/s00383-019-04465-6