

AN ALTERNATIVE TECHNIQUE FOR OPEN LAPAROSCOPY

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Summary: Laparoscopic cholecystectomy has become a routine surgical procedure. Complications related to use of the laparoscope frequently result from insertion of a Veress needle or blind introduction of the primary cannula on its trocar. This risk is clearly higher in patients who have undergone previous surgical operations. Open insertion with visualisation of abdominal cavity before the introduction of the primary cannula reduces the risk of major vascular and visceral injury. Nevertheless, open laparoscopy has rarely been adopted mainly due to gas leak from the wound and because it is time-consuming. A simple, quick and effective technique is described. The authors experience with this technique in the last 500 cases has shown that it has no effect on the duration of operation, and does not involve a larger skin incision. This technique has been associated with no operative difficulty.

DESCRIPTORS: Open laparoscopy. Technique

Laparoscopic cholecystectomy has become a routine surgical procedure. Complications related to use of the laparoscope frequently result from insertion of a Veress needle or blind introduction of the primary cannula on its trocar¹. This risk is clearly higher in patients who have undergone previous surgical operations. The incidence is 3.2 per thousand operations with mortality of 0.07 per thousand, quite exclusively in relation with vascular injuries (specially from aorta and iliac vessels) with a rate of 0.4 per thousand¹. Most intra-abdominal viscera and vessels were injured by the first blind trocar insertion.

Open insertion of the primary cannula was first described by Hasson who reported a reduction in the incidence of visceral injury using this approach². Nevertheless, open laparoscopy has rarely been adopted, mainly due to gas leak from the wound and because it is time-consuming.

A simple, quick and effective technique is described.

Surgical technique

A 2-cm skin incision is made in the supraumbilical position. The incision is deepened to expose the linea alba. Using a pair of tissue-holding forceps, the linea alba is suspended and a purse-string non-absorbable suture is placed around the tissue-holding forceps. The linea alba is then divided with scalpel in cross incision. This form allows a round opening simulating the hermetic trocar with cannula avoiding gas leak from horizontal incision (Figure 1). The peritoneum is then held with a pair of haemostats and an opening is made with scissors. A finger is pushed through the opening and swept around

the abdominal cavity to assure that it is free of adhesions. A 10-mm cannula is carefully placed into the opening without a trocar. A regular gauze is passed around the ends of the purse-string suture and it is pushed down with a haemostat to hold the cannula tightly without the use of a knot. During the extraction of the gallbladder the gauze is removed and the purse-string suture loosens. The suture is then tied in order to obtain an adequate closure of the incision in linea alba.

Discussion

Open insertion with visualisation of abdominal cavity before the introduction of the primary cannula reduces the risk of major vascular and visceral injury.

The purse-string suture with cross incision of the linea alba has several advantages. First, by hermetic introduction of cannula provided by cross

section and by purse-string suture around the cannula, leakage of gas is eliminated. The second advantage of this alternative technique is that it prevents accidental displacement of the cannula. While permitting intra-abdominal movement of the cannula by temporary release of the purse-string, distraction is limited by tension in the

suture by pressure on the gauze with a haemostat. Third, by release of the purse-string, extraction of the gallbladder is easily performed even in difficult cases like calcified gallbladders. The final advantage conferred by this technique is that it permits easy and secure closure of the linea alba, eliminating the risk of umbilical

herniation.

The authors experience with this technique in the last 500 cases has shown that it has no effect on the duration of operation, and does not involve a larger skin incision. This technique has been associated with no operative difficulty.

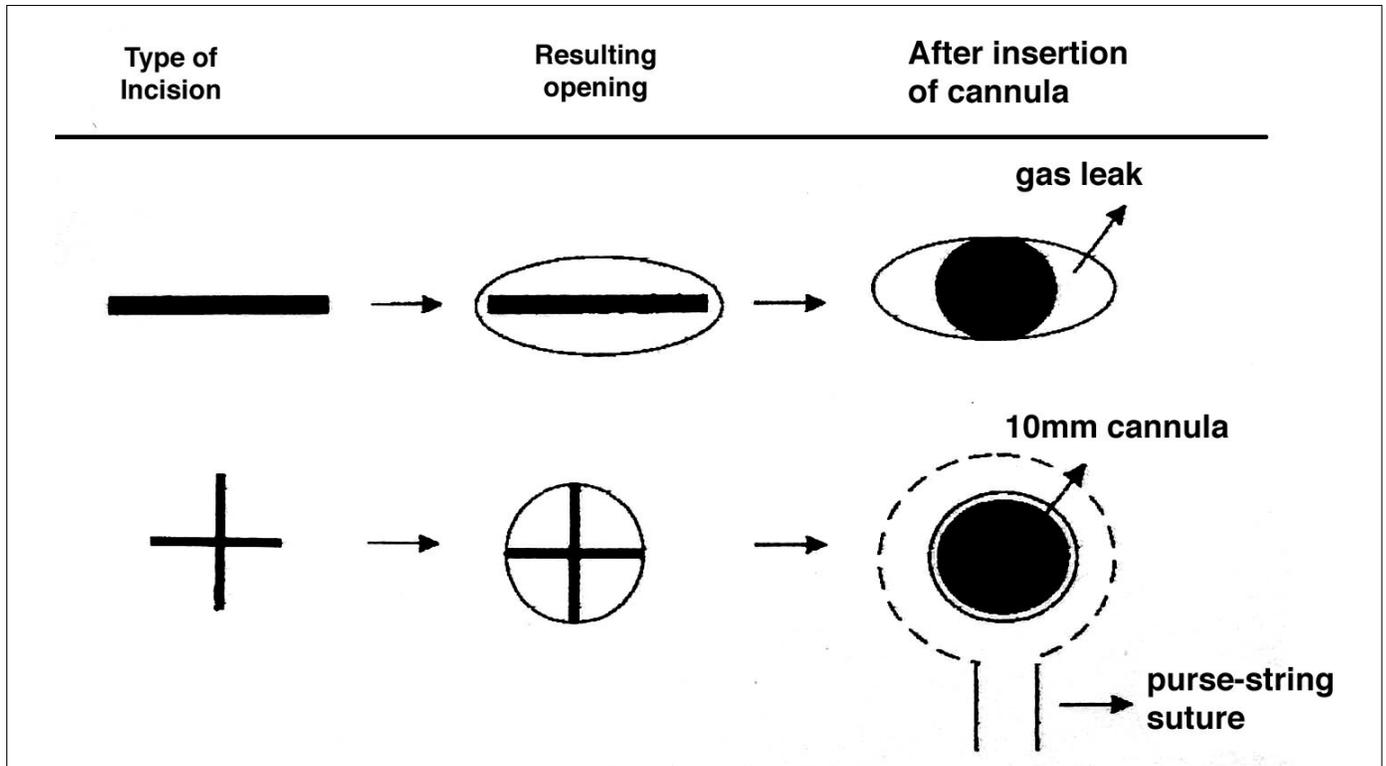


Figure 1 - Comparison between the standard incision and cross incision of the linea alba. Note that opening after cross incision may prevent gas leak.

RESUMO

MACHADO, M.A.C. e cols. - Inserção de primeiro trocarter sob visão direta - Técnica

A colecistectomia videolaparoscópica se tornou um procedimento cirúrgico rotineiro. As complicações relacionadas ao uso do laparoscópio freqüentemente são resultantes da inserção da agulha de Veress ou da introdução às cegas do primeiro

trocarter após o estabelecimento do pneumoperitônio. Este risco é evidentemente maior em pacientes com intervenções cirúrgicas prévias. A inserção do primeiro trocarter sob visão direta após a dissecação da aponeurose reduz o risco de lesões inadvertidas de vísceras e grandes vasos abdominais. Entretanto, esta técnica proposta inicialmente por Hasson, não tem sido muito empregada principalmente

devido à perda de gás e porque é mais demorado. Os autores descrevem uma técnica simples, rápida e efetiva para a introdução de trocarter sob visão direta. A experiência dos autores nos últimos 500 casos mostrou que esta técnica não tem efeito na duração da cirurgia, não necessita de incisão ampliada e é de fácil execução.

DESCRITORES: Laparoscopia. Técnica

References

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- 2 Hasson HM. Open laparoscopy vs closed laparoscopy. A comparison of complication rates. Advances in Planned Parenthood 13:41-50, 1978.