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ROTATION OF THE LIVER ON ITS VERTICAL AXIS.

BY

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ON June 23rd last I was asked by my colleague, Dr. Hobbblethwaite, to perform cholecystotomy for the removal of gall stones on a female patient of his, aged 33, in the hospital. The history and symptoms were the usual ones in a case of this kind, and the physical signs gave no clue either by their presence or absence of the difficulty that was shortly to be encountered. There was tenderness and rigidity of the right upper rectus and pain on pressing the twelfth rib about an inch from the spine.

On opening the abdomen in the right upper semilunar line by the usual gall bladder incision, which discloses the liver in its upper third, on this occasion the liver could not be seen until a fold of peritoneum which covered it and separated it from the diaphragm and upper abdominal wall had been lifted up. The hand was then introduced to explore the gall bladder, but no gall bladder was to be felt or seen, the only thing that bore the remotest resemblance to it was soon found to be the lower pole of the right kidney, which therefore must have been projecting forwards unduly. I then passed my hand up to the transverse fissure, but I could not find the foramen of Winslow, and though I could identify the anterior pillar and its contained structures, the common bile duct, the hepatic artery and portal vein, yet the "feel" of it seemed in some indefinable way to be not quite normal. There was nothing left to do but to trace the edge of the liver both ways; towards the left nothing could be identified the whole way round; towards the right I came upon the liver notch in a position corresponding to the anterior axillary line. Here was something definite at last. The fold of peritoneum which covered the edge and upper surface of the liver was found to be tied down at this notch and so was identified as the suspensory ligament, and this was confirmed by tracing its free edge to the umbilicus; its attachments to the diaphragm occupied the normal position. On tracing the edge of the liver further round still I came upon a small flaccid sac containing calculi suspended hammock-like by a mesentery from the under surface of the liver in a position corresponding to the posterior axillary line and in front and to the outer side of the upper part of the right kidney.

The riddle was now almost solved: the liver had rotated on its vertical axis through an angle of approximately 90 degrees; the lobe opposite the incision and covered by the suspensory ligament was the left with the characteristic omental tuberosity on its under surface, and the quadrate lobe, instead of being opposed to the abdominal wall between the mid and right semilunar lines, was related to the right hypochondrium between the anterior and posterior axillary lines. It was impossible to see the gall bladder through my present incision, though it extended from the margin of the ribs to opposite the umbilicus. I tried to rotate the liver back again to its normal position, grasping it with both hands to make the attempt, but I found that it was immovably fixed in this position, nor could the gall bladder be made to present in the incision. I therefore made a transverse incision at right angles to my first incision back as far as the mid axillary line. The gall bladder could now be opened in the corner of this incision, and I evacuated eighty-one small calculi. A tube was put in and brought out at the same place.

The patient made an uninterrupted recovery.

I regret that the condition of the patient after the transverse incision was made permitted us to do very little more than complete the operation we set out to do—namely, to relieve her of her gall stones—otherwise more time would have been spent in examining the relation of the liver to the neighbouring organs and viscera. I did make another attempt to pass my finger through the foramen of Winslow, but was no more successful. The stomach, pylorus, duodenum, and hepatic flexure of the colon

seemed to occupy their normal positions, and the liver seemed to be of the size to be expected in a female patient. The gastro-hepatic omentum seemed to be more superficial than is ordinarily the case, but I made no examination of the cardiac orifice of the stomach.

It is, I think, significant that the rotation of the liver is from left to right, and through the same angle, namely, 90 degrees, that the stomach and duodenum rotate early in fetal life, and at first it was a tempting theory to suppose that it took place at the same time.

In the meantime, however, I have had the benefit of a note from Professor Arthur Keith, who has set me right on this matter. It appears that this rotation is an extreme degree of prolapse of the liver, occurs only in women, and in women over 30 years of age. It is usually accompanied by evidence of visceroptosis. My patient was certainly on the spare side, and was such a patient as one would not be surprised to find a movable kidney in, but the right kidney, at any rate, was fixed with its lower pole projecting forwards under the liver. The only other evidence of visceroptosis was the gall bladder mesentery, which was about an inch long.

THE EFFECTS OF CINEMATOGRAPH DISPLAYS UPON THE EYES OF CHILDREN.

BY

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THE following observations refer only to the direct effects of the cinematograph display upon the eyes, and ignore indirect effects that may be held to arise from undue excitement, confinement within a place the atmosphere of which may be injurious, and the fatigue caused by the late hours at which children attend exhibitions.

In general, it may be said that the effects on the eyes of children do not differ from those experienced by adults. There are few, if any, adults who do not experience some annoyance, very many of the more sensitive or impressionable feel considerable strain; children may be taken to be in the same class as the more impressionable of adults, owing to their lesser power of resistance and readier experience of fatigue.

The unpleasant effects associated with the cinematograph exhibition, so far as they affect the eyes, are due to the following conditions: (1) Glare; (2) flicker; (3) rapidity of motion; (4) concentration of attention; (5) duration of exhibition.

Some of these conditions are peculiar to the cinematograph, others are found in the same or some degree in other optical exhibitions. But none of them are natural, and the more they depart from the conditions of natural phenomena the greater is the adverse influence on the eyes.

1. Glare.

Though the human eye has a wonderful power of adapting itself to varying conditions of illumination, it is well-nigh incapable of adapting itself to a single light in a dark place. The light may be feeble, but if the space in which it is exhibited be dark, it will be relatively intense, and therefore irritating to the eyes.

These conditions are found exemplified in the highest degree in all optical lantern exhibitions. To enhance the effect of the show the room is made as dark as possible, the light of the lantern as bright as possible, and the transparency as strong as possible. The light from the lantern is projected on to the whitest possible screen, and therefrom it is reflected directly into the eyes of the observer. All these necessary conditions of the show are bad conditions for the eyes; they all tend to produce the maximum of fatigue. The effects of glare are further intensified in the cinematograph show by the programme screens shown between the films. These slides are often far too brilliant in the contrast between the white print and the dark background; particularly bad are the impromptu slides made by scratching the writing on a screen of coloured gelatine. These slides should be prepared so that the contrast between the print and the background is the smallest necessary for visibility. In a