

Communication between the external iliac and portal veins / by Frank Champneys.

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COMMUNICATION BETWEEN THE EXTERNAL ILIAC
AND PORTAL VEINS. BY FRANK CHAMPNEYS, B.A.,
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A FEW days since I was struck by the appearance of the veins on the deep surface of the *Rectus Abdominis*, in an aged female subject under dissection at St Bartholomew's Hospital. They were very varicose, as large as an ordinary cedar pencil, and full of blood. They formed a chain from the lower end of the Rectus to the Umbilical fissure of the Liver. On further examination, I found the deep epigastric vein of the right side as large as a goose-quill, ending below, as usual, in the external iliac vein, and running with its artery towards the Umbilicus; near this spot one branch diverged and entered the muscle (no doubt to anastomose with the internal mammary), while the other ran onward and communicated freely opposite the Umbilicus with a pervious umbilical vein, which ran into the left division of the Portal vein. As this trunk passed the Umbilicus, it was joined by several small fibrous-looking bands, some of them still vascular, and all I think formerly veins from the abdominal parietes. Joining with the large trunk, just two inches above the Umbilicus, were two longer cords running from the Umbilicus itself, the lumen of one of which was just distinguishable for a short distance. The *Ductus Venosus* was quite impervious, the liver was much enlarged, pale, and marked with adhesions.

I have been furnished with the following facts. The woman, aged 48, was admitted into the Infirmary of the Holborn Union in December, 1870, suffering from jaundice, clay-coloured stools, short dry cough, and occasional vomiting. About six months afterwards she had slight ascites, which gradually disappeared. The liver was much enlarged, could be felt below the ribs, and the area of dulness was considerably increased. There was no tenderness on pressure or symptom of obstruction. There had been more or less discoloration of the skin with derangement of the liver for 15 months, and she had gradually declined in health.

Supplemental note to pp. 176 and 179 in Vol. VI. of this Journal.

In my paper on the Muscles of the Chimpanzee and Anubis, with their nerves, pp. 176 and 179, I used the expression "*Long Coracoid* of Birds, Monotremes and Reptiles."

I have not heard that this has given rise to any misapprehension, but, as it is better to avoid the possibility of mistake, I wish to state that I used those words in the sense of "*prolonged Coracoid*," or more exactly still in that of "*distal prolongation of the Coracoid*," that part namely which exists as bone in Reptiles, Birds and Monotremes, but in animals above them is either aborted or represented in Ligament only.

The expression was a colloquial one, and perhaps as correct as such expressions usually are; the words would have been better printed "*long Coracoid*" (with a small *l*). The interest of this ligamentous band consists of course in the fact of its persistence so high in the Animal Kingdom. The Drill (*Mandrilla leucophæa*) was the highest animal in which it had previously been found.

See Pagenstecher, *Zool. Gart.*, April 1867, p. 129.

FRANK CHAMPNEYS.

A communication between the Portal and Epigastric veins existing as a small branch is said by Luschka (*Anat.* II. 339) to be normal in Man even when adult, and in most Mammals. He describes it under the name of "*Vena parumbilicalis*," which runs, he says, into the Portal vein alongside of the Umbilical vein. It sometimes fuses with that vein, as in Burow's case (*Müller's Archiv*, 1838, p. 44) in a foetus, as in Hyrtl's case (*Österreichische Jahrbücher*, XXVII. 6, quoted by Theile) in an Anencephalous monster, and as in my case quoted above.

In an exaggerated condition it is, I believe, somewhat rare; instances of its enlargement are recorded by Monro (*Elements of Anatomy*, 1825, II. 282, quoted by Henle, *Gefasslehre*, p. 388); by Rokitansky (*Path. Anat.* IV. 373, under the name of "*Caput Medusæ*"); by Cruveilhier from a case of Pegot's (*Anat. Path.* I. Pl. 6, livraison 16, in a very exaggerated condition, beautifully drawn); Menière (*Arch. Gen. de Méd.* X. 381, 8), who also quotes a similar case of Manne's which he saw; by Serres (*Arch. Gen. de Méd.* Dec. 1823, p. 633); and Sappey (*Mém. de l'Acad. Roy. de Méd.* XXIII. 270), who, however, is wrong in asserting that this vein *never* joins the Umbilical vein; for it has done so in several cases quoted above, and it certainly did so in mine. In this collection of cases the amount of enlargement varied much, also the age and the absence or presence of communication with the Umbilical vein.

To this head ought probably to be referred a case recorded by Johannes Henricus Schulze (*Dissertatio de vasis umbilicalibus natorum et adultorum*. De Johanne Henrico Schulze in *Disput. Anat. Select.* V. Albertus Haller, Göttingen, MDCCL.); but this may possibly have been a case of regurgitation into a patent umbilical vein—"Mortuam (inquit) secui, atque primo occurrit vena umbilicalis * * * sanguinis copia turgida atque extensa, in quibusdam locis, ubi hæc vena contorquebatur, instar varicum tuberosa. Hepar justam habebat magnitudinem, sed erat album, tuberosum, inæquale, durum et exsangue." The dissection was by Volcherus Coiterus.

Schiff developed artificially a varicose state of this vein by tying the portal vein in Cats (*Canstatt's Jahresbericht*, 1862, p. 127).

From a comparative anatomy point of view this communication has, from the first times of its being observed, been compared with the Epigastric vein of cold-blooded, air-breathing vertebrata, and to this we need not further allude. A large communication between the Epigastric and Umbilical veins is described as normal by Serres and Gratiolet (*Comptes Rendus*, LII. 625), in a Rorqual (Balænoptera), and they infer from the increasing size of the Umbilical vein, as it approaches the Liver, that the blood sets from the systemic to the Portal system; this enlargement, however, may be due to Portal regurgitation. In an account of a Seal (*Phoca Vitulina*, dissected at Oxford, Sept. 1862, and described in a note-book there), I find that the Umbilical vein was open to within half-an-inch of the Umbilicus, but I cannot ascertain whether it was enlarged.

The development of the Allantois throws the greatest light on this connection between the veins of the anterior abdominal parietes

and the Umbilical veins, for the Allantois is not, as formerly stated, an originally hollow budding of the Intestine, but a solid outgrowth from the anterior body-walls (Kölliker, *Entwicklungsgeschichte*, pp. 106 and 420), and these two sets of veins are and must be closely connected. This connection has been described by Rolleston in the Tenrec (*Trans. Zool. Soc.* June, 1863, p. 288); by von Baer in the Pig and Sheep (*Entwicklungsgeschichte*, pp. 214, 247-8, 258); and by Coste in the Sheep (*Hist. Gén. et partic. de Développement*, Pl. iv. Figs. 1 and 2 u). The statement of Sappey that the enlarged communicating vein in some Liver diseases running alongside of the Umbilical vein never joins that vein (p. 270) is, therefore, improbable from a comparative anatomy point of view, besides being an incorrect statement with regard to Man. He even asserts (pp. 272 and 274) that the Umbilical vein receives no branches in its course, which is untrue; in the case I have recorded the small fibrous-looking bands, some of them still vascular, were no doubt the same branches as those described in other animals by Rolleston, Coste, and von Baer. It is true that in some cases (Sappey, 273) the Umbilical vein did coexist without fusion with this other trunk.

The distension of the veins of the abdominal parietes in some Liver diseases has been often observed, as by Sappey (p. 270); Frerichs (*Diseases of Liver*, II. 40), who quotes Sappey's statement above criticised, and in other obstructions by Hasse (*Path. Anat. Diseases of Organs of Circulation and Respiration*, p. 36).

It may be well to remark that, though this communication between the Epigastric and Portal veins is the channel most commonly distended in Liver diseases, several similar ones may exist, as mentioned by Frerichs, and might become varicose; of which two only will be here noted. The first is the connection between the capsular branches of the Portal vein and the Phrenic (*i.e.* superior Phrenic, or "pericardico phrenic," as shewn by the statement of Frerichs, p. 41, note, that the blood of the Phrenic eventually joins the subclavian). These were first made out by Kiernan (*Phil. Trans.* 1833, p. 732), and Frerichs says may always, in newly-formed adhesions of the Liver to the Diaphragm or Abdominal walls, be injected through the Portal vein. The second is the communication, rendered probable by a case of Reynard's (*Journ. Hebd.* 1829, quoted by Hasse, p. 36), between the Phrenic (*i.e.* superior Phrenic) and great Coronary vein, in cases of obliteration of the descending Vena cava, especially with closure of the Vena agygos. This is illustrated by the presence of such a vein in the Rat described by Rolleston (*Forms of Animal Life*, p. 3 and 171 q), running from the fatty tissue in the process of serous membrane which connects the apex of the Pericardium with the Diaphragm, along the Pericardium to end in the left Vena cava descendens.

Lastly, it is dangerous to deny, as Sappey has done, the possibility of connection between any contiguous sets of vessels, and for this point I would refer to some remarks by Turner in *Brit. and For. Med. Ch. Rev.* xxxii. 227.

