

hole existed towards the base of the valve. Another case (34) presents an extraordinary amount of disease, the tricuspid, mitral and aortic valves being thickened and calcified with consequent great contraction of the orifices. The tricuspid valves were hard, thickened, united together by their edges and formed a kind of cartilaginous septum, pierced in the middle by a hole which scarcely admitted the little finger.

Bertin remarks on the great rarity of induration of the tricuspid valve and the still rarer occurrence of its calcification, so rare indeed that Bichat denied that it could occur on the right side, in which opinion he has been refuted by facts.\* Bertin remarks "during 20 years we have not collected more than four cases of such hardening (cartilaginous);—we have never had an opportunity of seeing those concretions of calcareous phosphate, those ossifications we have so frequently spoken of in the left heart.

In the case I have given, the valve though thickened was not at all hardened.

The following exhibits congenital malformation of both right orifices:—

#### CASE II.

##### *Tricuspid thickened and irregular—only two Pulmonary Valves.*

A child, who from early infancy had exhibited palpitations and shortness of breath, died of bronchitis at the age of three years and two months. The heart was found much enlarged, weighing, with the aorta to its arch, and the pulm. artery to its bifurcation, 5½ ounces. The right ventricle felt as hard as the left; right auricle very large; tricuspid valve was found with its edges covered with knobby cartilaginous thickenings, forming an irregular orifice. Walls of right ventricle nearly half an inch thick, and quite as thick as those of left ventricle—the pulmonary artery was dilated to ¾ of an inch in diameter, and was larger than aorta. Its semilunar valves were only two, but not at all diseased, and when closed, formed a perfect septum. The muscoli pectinati of right auricle were largely developed. Foramen ovale closed;—left auricle and ventricle natural; mitral valve irregular in shape, (one side being very long, the other proportionally short), but not otherwise diseased.

The union of the pulmonary semilunar valves is an extremely rare occurrence. Bertin, in his 56th case, gives an example which he says is perhaps the only one of this kind known; the orifice of the pulmonary

---

\* M. Philouze a présenté à la société anatomique un cas de retrecissement de l'orifice de l'artere pulmonaire dans lequel les trois valvules sigmoïdes réunies étaient considérablement épaissies et ossenses. L'une de ces valvules présentait un prolongement osseux, etc. —l'orifice auriculo-ventriculaire droit était ossifié et un peu retreci. (Cruveilhier, Anat. Pathol. liv. 28) He also refers to other cases