artery was closed by a septum pierced with a hole of two lines and a half in diameter, beyond which the vessel presented nothing unnatural. He considers it congenital malformation. Morgagni gives a case in which the sigmoid valves were cartilaginous, and so intricately connected at their free edges, that they scarcely left an aperture so large as a lentil. The foramen ovale was open. Carswell, (Path. Anat.) has figured a case of a similar kind to that of Bertin. The pulmonary artery was closed by the coalesced valves, whose free extremities were converted into a broad thickened ring, supported by three rays, (like spokes of a wheel,) connecting it with the base of the valve.

A case exhibiting a nearly similar appearance is figured by Cruveilhier (28th livr.), and he refers to others. Bouillaud, also, has collected some cases of this rare malformation.

An unique case of obstruction of the pulmonary artery is described and figured in Elliotson's Lumleian lectures, (plate 1, fig. 2.) In this instance, the obstruction arose not from any defect in the artery or its valves, but in consequence of the muscular substance "growing together around the mouth of the pulmonary artery, leaving a very small opening, beyond which was the real mouth of the artery of its natural size with its valves." The patient had always suffered from dyspnœa, and Dr. E. fancied it congenital.

But it is chiefly on the left side that we meet with degenerations of the valves, and narrowings of the orifices. I might quote from authors numerous examples of extreme arctation. Hope says, he has seen every degree up to the size of a smallish quill. Bertin (case 51) found the mitral orifice reduced to "a kind of ovular chink, the greatest diameter of which was not more than three lines." Rokitansky says "this contraction is frequently so considerable, that the diameter of the auriculo-ventricular opening, more especially on the left side, scarcely equals that of the little finger, or even of a goose quill, while the arterial openings would not admit of the passage of anything larger than a crow quill." Dr. Sieveking (Path. Anatomy,) delineates a case of extreme narrowing of the aortic orifice in an adult, in which the passage was contracted to the size of a pea,—p. 324. One of the most wonderful instances of this obstruction is narrated by Dr. Stokes in his late excellent work on diseases of the Heart and Aorta, p. 153. He says, "The left ventricle was distended to the last degree with fluid blood, and the aortic opening exhibited the most extreme amount of obstruction from ossific deposits that I have ever seen or read of. At first, indeed, it seemed as if there was no opening; but when examined on the ventricular side, a very small slit was discoverable of about four lines in length and one in breadth, through which it was just possible to pass a small probe."