

Development, ossification and variation of the pelvic bone

Development of the mesenchyme for the base of the *os coxae* takes place at the base of the growing limb bud from the end of the 5th week of development. Chondrification begins in the 6th week of development. The first **ossification** appears in the *os ilium* in the 9th week of development.

Ossification of the pelvic bone

There are **3 ossifying nuclei** on the pelvic bone :

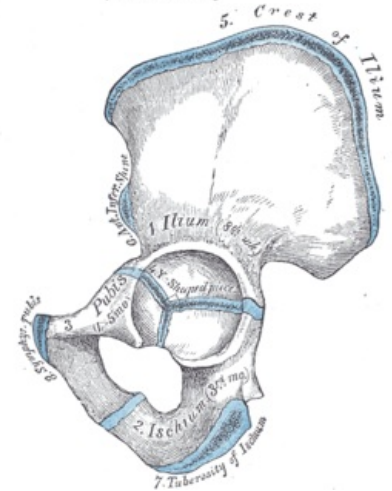
- in *os ilium* (9th fetal week);
- in *os ischii* (4th fetal month);
- in the *os pubis* (4th–5th fetal month).

From these centers, ossification spreads to each bone separately. At birth, the entire area of the acetabula, part of the front side of the *os ilium*, *crista iliaca* and also a strip along the lower edge of the *os coxae* are cartilaginous. The extensive cartilage on the outside of the acetabulum transitions to the inner surface of the bone, where it forms a **Y shape** and separates the *os ilium*, *os ischii*, and *os pubis*.

The ossifying *os ischii* and *os pubis* fuse with their shoulders in the 7th–8th. year of life. Ossification of the *cartilago ypsiloniformis* starts from two secondary ossification centers in the acetabulum around the 12th–13th. year. One of these ossification centers, temporarily more prominent and separate, is called **the acetabuli axis**. This ossification is also the area of growth of the entire acetabular landscape. The cartilaginous band on the lower edge of the *os coxae* begins to ossify above the *tuber ischiadicum* and the ossification spreads forward. At the same time, the ossification merges with the surrounding bone. This process takes place between 15–18 year of life. At this time, ossification and subsequent fusion with the surroundings in the cartilaginous rim of the *crista iliaca* also takes place.

Separate **secondary apophyses** appeared around the 15th–16th century. year they can appear in the *tuberculum pubicum*, in the *spina iliaca anterior posterior*, *spina ischiadica* and on the edge of the *pubic symphysis*. They merge with the surroundings after the 16th–18th century a year.

By eight centers { Three primary (Ilium, Ischium, and Pubis)
Five secondary



Pelvic bone and its parts.

Variations of the pelvic bone

There are several minor shape variations on the pelvic bone:

1. **sulcus supraacetabularis** as the starting point of the *caput reflexum musculi recti femoris*;
2. **tuberculum supraacetabulare** – bump at the place of *sulcus supraacetabularis*;
3. **sulcus infraacetabularis** – recess under the joint fossa, in the course of the *obturatorius externus muscle*;
4. **spina ischiadica** of unusual shape, elongated, with facets for the formations attached to it;
5. **sulcus preauricularis** – a non-constant vertical groove on the inner side of the bone in front of the *facies auricularis*, for connecting *ligaments. anterior sacroiliac*.

Links

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- Articulatio coxae

References

- ČIHÁK, Radomír. *Anatomie 1*. 3. edition. Grada, 2011. 552 pp. ISBN 978-80-247-3817-8.