CONDITION

Caput succedaneum

Learn why caput succedaneum causes temporary scalp swelling in newborns, how it differs from other birth-related head swelling, and when to seek care.

WHAT IT IS
Temporary newborn scalp swelling

BODY SYSTEM
Skin and scalp

MAIN SYMPTOMS
Soft puffy scalp swelling, poorly defined edges, mild bruising, uneven head shape

WHAT CAUSES IT
Pressure during labor

HOW IT IS DIAGNOSED
Clinical scalp examination

MAIN TREATMENT
Observation

CAN IT BE CURED?
Yes, usually resolves without treatment

IS IT AN EMERGENCY?
Sometimes, if swelling rapidly expands

LONG-TERM OUTLOOK
Complete recovery with no lasting effects

Overview

Caput succedaneum is a temporary area of swelling on a newborn's scalp. It develops when pressure during labor causes fluid to collect in the soft tissues just beneath the skin.

The swelling usually forms over the part of the head that entered the birth canal first. It may look alarming, but caput succedaneum is usually harmless. It does not mean that the brain is swollen or injured. Most cases improve without treatment within a few days.

A newborn's skull is made of several bones rather than one solid piece. The spaces where these bones meet are called sutures . Because caput succedaneum affects the tissue above the skull, the swelling can extend across these suture lines and sometimes across the middle of the scalp.

Caput succedaneum is different from bleeding under the scalp, including a cephalohematoma or subgaleal hemorrhage. A clinician should examine a newborn with head swelling to identify which condition is present. This is especially important if the swelling is growing or the baby appears unwell.

Symptoms

The main sign is soft, puffy swelling on the scalp that is usually present at birth. The swelling may:

Caput succedaneum may occur along with molding , which is a temporary change in head shape caused by the skull bones overlapping during birth. Both changes usually become less noticeable soon after delivery.

The swelling itself generally does not cause pain, feeding problems, unusual sleepiness, or changes in behavior. Symptoms such as these may have another cause and should not be assumed to come from caput succedaneum.

A baby should receive urgent medical assessment if the scalp swelling is rapidly getting larger, feels very loose or fluid-filled, or spreads around the sides or back of the head. Pale or bluish skin, difficulty breathing, marked sleepiness, weakness, seizures, a weak cry, or poor feeding also require immediate attention. If the baby is still in the hospital, alert the clinical team at once. If the baby is at home, seek emergency medical care.

- Cross the skull's suture lines or the middle of the scalp
- Have poorly defined edges rather than a clear border
- Feel soft, spongy, or slightly firm
- Leave a temporary indentation when gently pressed by a clinician
- Include mild bruising or a change in skin color
- Make the baby's head look pointed, uneven, or larger in one area

Causes and risk factors

During labor, the baby's head may press against the cervix, vaginal walls, and surrounding tissues. This pressure can slow the normal flow of blood and lymphatic fluid away from the scalp. Fluid then collects under the skin, producing caput succedaneum.

The swelling may start before the cervix is fully open. It is most often associated with labor and

vaginal birth, although it can be seen after a cesarean birth if labor and pressure on the head occurred beforehand.

Factors that may make caput succedaneum more likely include:

A vacuum device can also produce a localized area of swelling called a chignon where the cup was applied. Like caput succedaneum, a chignon usually settles over a short period. However, newborns delivered with vacuum assistance are observed carefully because other scalp injuries can also occur.

Caput succedaneum is not caused by anything a parent did during pregnancy. It cannot usually be prevented once the normal pressures of labor begin.

- A long or difficult labor
- Extended pressure on one area of the baby's scalp
- Rupture of the amniotic sac, which removes some of the fluid cushioning around the head
- Vacuum-assisted delivery
- A larger presenting part of the head or an unusual head position during labor

Diagnosis

A clinician usually diagnoses caput succedaneum by examining the baby's scalp, reviewing how the birth progressed, and checking the baby's overall condition. The timing, location, texture, and borders of the swelling are important.

Tests such as ultrasound, X-ray, CT, or MRI are not normally needed when the examination clearly shows uncomplicated caput succedaneum. Testing may be considered if the swelling behaves unexpectedly, the diagnosis is uncertain, or there are concerns about bleeding, a skull injury, or another medical problem.

The clinician may compare caput succedaneum with several other causes of newborn head swelling:

The baby may also be checked for jaundice. Jaundice is yellowing of the skin or the whites of the eyes caused by a substance called bilirubin. Bilirubin forms as red blood cells are broken down. Bruising can add to the amount of bilirubin the newborn's body must process, although uncomplicated caput succedaneum does not always cause jaundice.

- Cephalohematoma: This is a collection of blood between a skull bone and its outer covering. It has clearer borders and does not cross suture lines. It may become more noticeable several hours after birth and can take weeks or longer to disappear.

- Subgaleal hemorrhage: This is bleeding into a deeper space beneath the scalp. The swelling can cross suture lines, spread widely, and increase after birth. Because this space can hold a significant amount of blood, subgaleal hemorrhage is an emergency.
- Molding: This is a change in the shape of the skull caused by pressure and overlapping skull bones. It is not a pocket of fluid.
- Other masses or skin conditions: Cysts, infections, and uncommon skull or scalp abnormalities may sometimes resemble birth-related swelling.

Treatment and management

Caput succedaneum normally needs observation rather than medical treatment. The collected fluid is gradually absorbed by the baby's body, and the scalp often returns to its usual appearance within hours to a few days.

The swelling should not be punctured or drained. Doing so does not make it resolve faster and could cause bleeding or infection. Parents and caregivers should also avoid pressing, rubbing, or massaging the area.

Routine newborn care can continue. The scalp can be washed gently as directed by the care team. A baby should still be placed flat on their back for every sleep on a firm, level sleep surface. Sleep position should not be changed in an attempt to reduce the swelling.

Before discharge, the healthcare team may:

Medicines are not usually needed for caput succedaneum. If another condition is found, treatment will depend on that diagnosis rather than on the caput itself.

- Recheck the size and feel of the swelling
- Examine the skin for bruising or injury
- Assess feeding, alertness, temperature, and vital signs
- Screen for jaundice according to the baby's age and clinical needs
- Explain what changes parents should expect at home

Complications

Most babies with caput succedaneum recover completely and have no lasting effects. The swelling does not interfere with brain growth or development, and it does not reshape the skull permanently.

Bruising within the swollen area may contribute to a rise in bilirubin as the trapped blood cells break down. A clinician may recommend routine or additional bilirubin checks based on the baby's examination, age, and other risk factors. Parents should contact the baby's healthcare professional if yellow color is becoming more noticeable, especially if it extends toward the abdomen, arms, or legs or occurs with poor feeding or unusual sleepiness.

Skin irritation or infection is uncommon. Increasing redness, warmth, tenderness, drainage, an unpleasant smell, or fever is not an expected part of recovery and needs prompt medical assessment. A temperature of 100.4°F \(38°C\) or higher in a baby younger than 3 months requires immediate medical guidance.

The most important concern is mistaking a more serious form of scalp bleeding for caput succedaneum. Subgaleal hemorrhage can cause major blood loss. Warning signs include rapidly expanding or shifting swelling, a very boggy scalp, swelling around the ears or neck, pale skin, fast or difficult breathing, weakness, poor feeding, or difficulty waking the baby. These symptoms require emergency care.

Follow up

Routine newborn follow-up is usually enough when caput succedaneum is getting smaller and the baby is feeding and behaving normally. The clinician may examine the scalp again during the first newborn visit and review the baby's weight, hydration, feeding, and jaundice screening results.

At home, parents can observe the swelling without repeatedly pressing it. It may help to note whether the area is becoming smaller from one day to the next. Mild changes in head shape often improve along with the swelling.

Contact the baby's healthcare professional promptly if:

Seek emergency care for rapidly spreading swelling or any sign that the baby is pale, weak, difficult to wake, having trouble breathing, or otherwise seriously unwell. These are not routine features of caput succedaneum.

- The swelling is not clearly improving after the first few days
- It becomes larger, firmer, or more clearly defined
- A new lump appears after discharge
- The skin becomes red, warm, broken, or begins draining
- The baby develops increasing jaundice

- Feeding becomes more difficult or the baby has fewer wet diapers than expected

Sources

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