

Creating a Community of Practice for the WFPI

Through

Leveraging + Preserving Our Present

Michael P. D'Alessandro, M.D.

University of Iowa College of Medicine / University of Iowa Children's Hospital

Radiopaedia

- Successful media strategy
 - Radiology textbook Web site is content hub
 - Social media used to promote cases / topics + drive users to Web site

The screenshot displays the Radiopaedia.org website interface. At the top, the site's name and logo are visible, along with navigation options like 'Log In' and 'Sign up'. Below this, there are buttons for 'ENCYCLOPEDIA', 'Add Article', 'PATIENT CASES', 'Add Case', and 'Quiz Mode'. A search bar is located on the right side of the header.

The main content area features a prominent banner stating: "Radiopaedia.org is a free educational radiology resource with one of the web's largest collections of radiology cases and reference articles." Below this banner, there is a "Case of the Day" section featuring an X-ray image of a chest and a text box titled "Ewing sarcoma" contributed by Dr Hani Al Salam. The text describes the tumor and provides a link to "View Case".

To the right of the main content, there are statistics showing "22096 cases" and "9387 articles". Below these statistics is a section for "RADIOPAEDIA COURSES" with a video player and a "WATCH VIDEO ON DEMAND OR ATTEND IN PERSON" button. Further down, there is a "Recent News" section with a tweet from @Radiopaedia asking for a diagnosis of a case.

At the bottom of the page, there is a "Recently Published Cases" section listing several cases with their titles and dates, such as "Sarcoidosis" by Dr Mark Hall (6 May 2016) and "Breast haemangioma" by Dr Alexandra Stanislavsky (29 Feb 2016).

The footer of the page contains a disclaimer: "This site is for use by medical professionals. To continue you must accept our use of cookies and the site's Terms of Use." with an "Accept" button.

WFPI Textbook of Pediatric Imaging

- Successful media strategy
 - Pediatric radiology textbook Web site is content hub
 - Social media used to promote cases / topics + drive users to Web site

en.wikipedia.org
Congenital pulmonary airway malformation - Wikipedia, the free encyclopedia

Not logged in | Talk | Contributions | Create account | Log in

Article | Talk | Read | Edit | View history | Search

Congenital pulmonary airway malformation

From Wikipedia, the free encyclopedia

Congenital pulmonary airway malformation (CPAM), formerly known as **congenital cystic adenomatoid malformation** (CCAM), is a congenital disorder of the lung similar to bronchopulmonary sequestration. In CPAM, usually an entire lobe of lung is replaced by a non-working cystic piece of abnormal lung tissue. This abnormal tissue will never function as normal lung tissue. The underlying cause for CPAM is unknown. It occurs in approximately 1 in every 30,000 pregnancies.^[1]

In most cases the outcome of a fetus with CPAM is very good. In rare cases, the cystic mass grows so large as to limit the growth of the surrounding lung and cause pressure against the heart. In these situations, the CPAM can be life-threatening for the fetus. CPAM can be separated into five types, based on clinical and pathologic features.^[2] CPAM type 1 is the most common, with large cysts and a good prognosis. CPAM type 2 (with medium-sized cysts) often has a poor prognosis, owing to its frequent association with other significant anomalies. Other types are rare.^[3]

Contents [hide]

- 1 Diagnosis and treatment criteria
- 2 Imaging
- 3 Treatment
- 4 Popular culture
- 5 References
- 6 External links

Classification and external resources

Specialty	medical genetics
ICD-10	Q34.8 ⓘ (EUROCAT Q33.80)
ICD-9-CM	748.4 ⓘ
DiseasesDB	32408 ⓘ
eMedicine	ped/534 ⓘ radio/186 ⓘ
MeSH	D015615 ⓘ

[edit on Wikidata]

Diagnosis and treatment criteria [edit]

CPAMs are often identified during routine prenatal ultrasonography. Identifying characteristics on the sonogram include: an echogenic (bright) mass appearing in the chest of the fetus, displacement of the heart from its normal position, a flat or everted (pushed downward) diaphragm, or the absence of visible lung tissue.


CPAMs are classified into three different types based largely on their gross appearance. Type I has a large (>2 cm) multiloculated cysts. Type II has smaller uniform cysts. Type III is not grossly cystic, referred to as the "adenomatoid" type. Microscopically, the lesions are not true cysts, but communicate with the surrounding parenchyma. Some lesions have an abnormal connection to a blood vessel from an aorta and are referred to as "hybrid lesions."

Imaging [edit]


The earliest point at which a CPAM can be detected is by prenatal ultrasound. The classic description is of an echogenic lung mass that gradually disappears over subsequent ultrasounds. The disappearance is due to the malformation becoming filled with fluid over the course of the gestation, allowing the ultrasound waves to penetrate it more easily and rendering it invisible on sonographic imaging.

When a CPAM is rapidly growing, either solid or with a dominant cyst, they have a higher incidence of developing venous outflow obstruction, cardiac failure and ultimately *hydrops fetalis*. If *hydrops* is not present, the fetus has a 95% chance of survival. If it is seen, the fetus will die without *in utero* surgery, or delivery if it development after 32 weeks. The greatest period of growth is during the end of the second trimester, between 20-26 weeks.

A measure of mass volume divided by head circumference, termed cystic adenomatoid malformation volume ratio (CVR) has been developed to predict the risk of *hydrops*. The lung mass volume is determined using the formula (length × width × anteroposterior diameter ÷ 2), divided by head circumference. With a CVR greater than 1.6 being considered high risk. Fetuses with a CVR less than 1.6 and without a dominant cyst have less than a 3% risk of *hydrops*. After delivery, if the



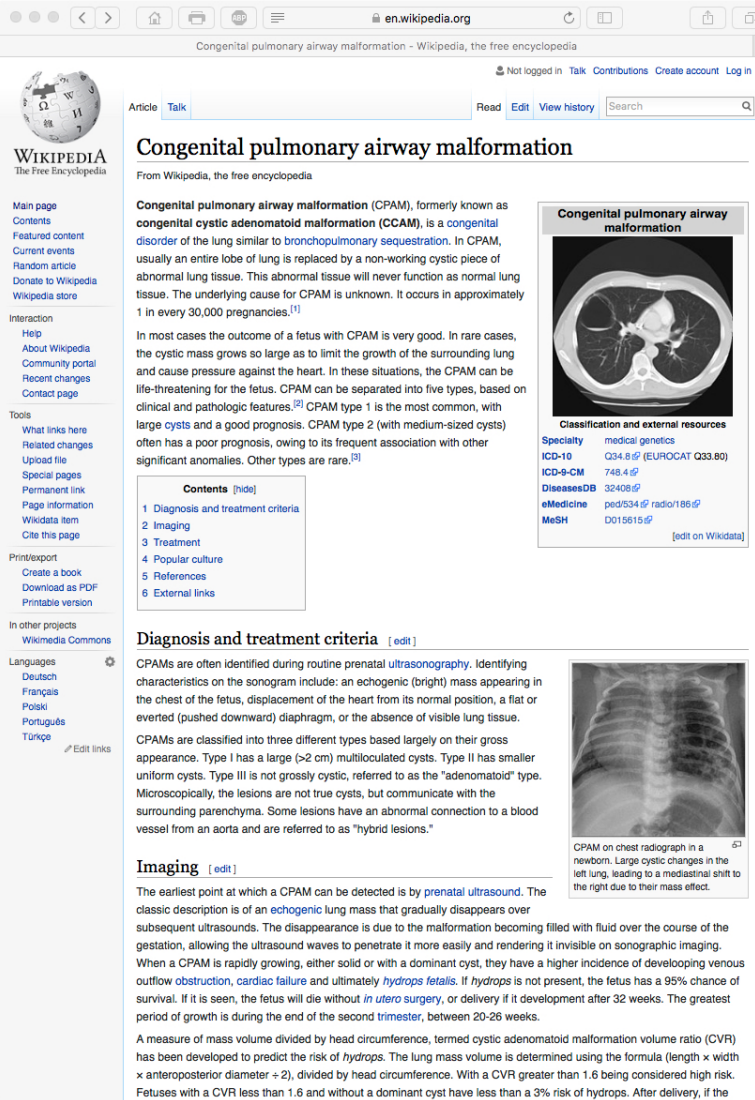
Congenital pulmonary airway malformation



CPAM on chest radiograph in a newborn. Large cystic changes in the left lung, leading to a mediastinal shift to the right due to their mass effect.

Where Do You Get the Content?

- Educational posters of meetings from 13 member societies
- Submitted in MediaWiki format (rather than PowerPoint)
- Peer reviewed by educational poster session reviewers
- Edited by authors
- Published online for meeting + then forever after
 - Readers send corrections + comments to authors
 - Editing restricted to authors + site editors
- Content serves as basis of next year's social media campaign



The screenshot shows the Wikipedia article for "Congenital pulmonary airway malformation". The page includes a navigation bar at the top with "en.wikipedia.org" and "Congenital pulmonary airway malformation - Wikipedia, the free encyclopedia". Below the navigation bar, there is a search bar and a "Not logged in" notification. The main content area features a title "Congenital pulmonary airway malformation" and a sub-header "From Wikipedia, the free encyclopedia". The article text describes CPAM, formerly known as congenital cystic adenomatoid malformation (CCAM), as a congenital disorder of the lung. It mentions that CPAM usually replaces an entire lobe of lung with non-working cystic tissue. A classification table on the right lists medical genetics, ICD-10 (Q34.8), ICD-9-CM (748.4), DiseasesDB (32408), eMedicine (ped/534), and MeSH (D015615). A table of contents lists sections: 1 Diagnosis and treatment criteria, 2 Imaging, 3 Treatment, 4 Popular culture, 5 References, and 6 External links. The "Diagnosis and treatment criteria" section discusses prenatal ultrasonography and classification into three types (I, II, III) based on gross appearance. The "Imaging" section discusses prenatal ultrasound detection and the classic description of an echogenic lung mass.

Classification and external resources

Specialty	medical genetics
ICD-10	Q34.8 ⓘ (EUROCAT Q33.80)
ICD-9-CM	748.4 ⓘ
DiseasesDB	32408 ⓘ
eMedicine	ped/534 ⓘ radiol/186 ⓘ
MeSH	D015615 ⓘ

[edit on Wikidata]

Contents [hide]

- 1 Diagnosis and treatment criteria
- 2 Imaging
- 3 Treatment
- 4 Popular culture
- 5 References
- 6 External links

Diagnosis and treatment criteria [edit]

CPAMs are often identified during routine prenatal ultrasonography. Identifying characteristics on the sonogram include: an echogenic (bright) mass appearing in the chest of the fetus, displacement of the heart from its normal position, a flat or everted (pushed downward) diaphragm, or the absence of visible lung tissue.

CPAMs are classified into three different types based largely on their gross appearance. Type I has a large (>2 cm) multiloculated cysts. Type II has smaller uniform cysts. Type III is not grossly cystic, referred to as the "adenomatoid" type. Microscopically, the lesions are not true cysts, but communicate with the surrounding parenchyma. Some lesions have an abnormal connection to a blood vessel from an aorta and are referred to as "hybrid lesions."

Imaging [edit]

The earliest point at which a CPAM can be detected is by prenatal ultrasound. The classic description is of an echogenic lung mass that gradually disappears over subsequent ultrasounds. The disappearance is due to the malformation becoming filled with fluid over the course of the gestation, allowing the ultrasound waves to penetrate it more easily and rendering it invisible on sonographic imaging.

When a CPAM is rapidly growing, either solid or with a dominant cyst, they have a higher incidence of developing venous outflow obstruction, cardiac failure and ultimately *hydrops fetalis*. If *hydrops* is not present, the fetus has a 95% chance of survival. If it is seen, the fetus will die without *in utero* surgery, or delivery if it develops after 32 weeks. The greatest period of growth is during the end of the second trimester, between 20-26 weeks.

A measure of mass volume divided by head circumference, termed cystic adenomatoid malformation volume ratio (CVR) has been developed to predict the risk of *hydrops*. The lung mass volume is determined using the formula (length × width × anteroposterior diameter + 2), divided by head circumference. With a CVR greater than 1.6 being considered high risk. Fetuses with a CVR less than 1.6 and without a dominant cyst have less than a 3% risk of *hydrops*. After delivery, if the

Advantages

- **Authors get educational poster + textbook chapter in CV**
 - Receive altmetrics yearly for chapter (pages read, users)
 - Receive impact of chapter in social media measured by ImpactStory
- **Great project for**
 - Senior radiologists to select poster / chapter topics + oversee
 - Junior radiologists to write chapters, do tech + social media
 - Users – free textbook of pediatric imaging
- **Start small – partner at first with one member society**
 - Could be multilingual as you partner with more societies
- **Cost – almost nothing**
- **Takes advantage of pre-existing content workflow in form of educational posters + preserves it**
- **Result is tangible – permanent pediatric imaging reference**
 - Build community of practice of members (authors/editors) around it