An A or V pattern strabismus is simply one that

Q

A/V Strabismus
A/V Strabismus

A-pattern exotropia
A/V Strabismus

V-pattern exotropia
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze.
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- Occurs in about [20%] of strabismus cases.
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A/V Strabismus

- An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze.
- Occurs in about 20% of strabismus cases.

Can be secondary to:
1) EOM problem dysfunction
2) a different EOM problem dysfunction
3) serious congenital problem w/ secondary EOM effects
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. Occurs in about 20% of strabismus cases. Can be secondary to:

1) Oblique dysfunction
2) Horizontal or vertical rectus dysfunction
3) Craniosynostosis
An **A** or **V** pattern strabismus is simply one that changes magnitude in up- and downgaze. It occurs in about 20% of strabismus cases. It can be secondary to:

1) **Oblique** dysfunction
2) Horizontal or vertical rectus dysfunction
3) **Craniosynostosis**

**Question:** Which pattern (A vs V) is associated with which oblique overaction?

- SO overaction causes...
- IO overaction causes...
An **A or V pattern** strabismus is simply one that changes magnitude in up- and down-gaze.

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- Can be secondary to:
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  3. Craniosynostosis

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Which pattern (A vs V) is associated with which oblique overaction?

--SO overaction causes…**A pattern strabismus** (A’s are ‘superior’)
--IO overaction causes…**V pattern strabismus**
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. Occurs in about 20% of strabismus cases. Can be secondary to:
1) Oblique dysfunction
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To what does the term craniosynostosis refer?

Premature closure produces abnormal growth patterns of the skull and face. Depending upon which suture(s) closes prematurely, specific and well-recognized patterns of craniofacial malformation may result.
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Occurs in about 20% of strabismus cases.

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To what does the term craniosynostosis refer?
To the premature closing of cranial suture(s)
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Craniosynostoses

What is the other broad category of craniofacial syndrome?
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. Occurs in about 20% of strabismus cases. Can be secondary to:
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Craniosynostoses
Craniosynostoses
Not craniosynostoses

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Which not-craniosynostosis craniofacial malformations are addressed in the Peds book?
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A/V Strabismus

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Craniosynostoses
Not craniosynostoses

Which not-craniosynostosis craniofacial malformations are addressed in the Peds book?
- Goldenhar
- Treacher Collins
- Pierre Robin sequence
- Fetal alcohol
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Craniosynostoses Not craniosynostoses

Which craniosynostosis syndromes are addressed in the Peds book?

- Goldenhar
- Treacher Collins
- Pierre Robin sequence
- Fetal alcohol

Two categories of craniofacial syndrome
A/V Strabismus

- An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze.
- Occurs in about 20% of strabismus cases.
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Craniosynostosis

Two categories of craniofacial syndrome

- Craniosynostoses
  -- Crouzon
  -- Apert
  -- Pfeiffer
  -- Saethre-Chotzen

- Not craniosynostoses
  -- Goldenhar
  -- Treacher Collins
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What strabismus pattern are craniosynostoses usually associated with?

V-pattern XT
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**Questions:**

- What strabismus pattern are craniosynostoses usually associated with?
  - V-pattern XT

- What are the three most common craniosynostoses associated with V-pattern XT?
  - --
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What strabismus pattern are craniosynostoses usually associated with? V-pattern XT

What are the three most common craniosynostoses associated with V-pattern XT?
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-- Apert syndrome
-- Pfeiffer syndrome

All three craniosynostoses have similar facies. How can they be differentiated?

Crouzon syndrome: Characteristic facies
Apert syndrome: Facies + syndactyly of hands and feet
Pfeiffer syndrome: Facies + broad thumbs and broad big toes
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**Q**

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What are the three most common craniosynostoses associated with V-pattern XT?
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*All three craniosynostoses have similar facies. How can they be differentiated?*

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What strabismus pattern are craniosynostoses usually associated with? V-pattern XT

What are the three most common craniosynostoses associated with V-pattern XT? --Crouzon syndrome --Apert syndrome --Pfeiffer syndrome

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Apert syndrome: Characteristic facies and marked syndactyly
A/V Strabismus

- An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze.
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What strabismus pattern are craniosynostoses usually associated with?
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What are the three most common craniosynostoses associated with V-pattern XT?
- Crouzon syndrome
- Apert syndrome
- Pfeiffer syndrome

Mnemonics:
- ‘Patients with Apert syndrome can’t get their fingers and toes apert’ (apart)
- ‘Michelle Pfeiffer has huge thumbs and toes’

All three craniosynostoses have similar facies. How can they be differentiated?
- Crouzon syndrome: Characteristic facies only
- Apert syndrome: Facies + syndactyly of hands and feet
- Craniosynostosis
A/V Strabismus

An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. It occurs in about 20% of strabismus cases and can be secondary to:

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- **Crouzon syndrome**: Characteristic facies only
- **Apert syndrome**: Facies + syndactyly of hands and feet
- **Pfeiffer syndrome**: Facies +

**Mnemonics**:

- ‘Patients with Apert syndrome can’t get their fingers and toes apert’ (apart)
- ‘Michelle Pfeiffer has huge thumbs and toes’

---

**Q**

- Craniosynostosis

**What strabismus pattern are craniosynostoses usually associated with?**

V-pattern XT

**What are the three most common craniosynostoses associated with V-pattern XT?**

-- Crouzon syndrome
-- Apert syndrome
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A/V Strabismus

- An A/V change in magnitude is simply one that changes magnitude in up- and downgaze.
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**What strabismus pattern are craniosynostoses usually associated with?**
- V-pattern XT

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- Crouzon syndrome
- Apert syndrome
- Pfeiffer syndrome

__Mnemonics:__

‘Patients with Apert syndrome can’t get their fingers and toes apert’ (apart)

All three craniosynostoses have similar facies. How can they be differentiated?

- Crouzon syndrome: Characteristic facies only
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All three craniosynostoses have similar facies. How can they be differentiated?
Pfeiffer syndrome: Characteristic facies, broad thumbs/great toes
A/V Strabismus

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Mnemonics:
‘Patients with Apert syndrome can’t get their fingers and toes apert’ (apart)
‘Michelle Pfeiffer has huge thumbs and toes’ (not really)
3) **Craniosynostosis**

**What strabismus pattern are craniosynostoses usually associated with?**

*V-pattern XT*

**What are the three most common craniosynostoses associated with V-pattern XT?**

-- Crouzon syndrome
-- Apert syndrome
-- Pfeiffer syndrome
**A/V Strabismus**

- **Mnemonics**

  - Patients with Apert syndrome can't get their fingers and toes *apert* (apart)
  - Michelle Pfeiffer has huge thumbs and toes

- **A/V Strabismus**

  - What strabismus pattern are craniosynostoses usually associated with? V-pattern XT

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- **In addition to V-pattern XT, what other ocular abnormalities are often present in pts with craniosynostosis?**
  -- hypertelorism
  -- telecanthus
  -- shallow orbits
  -- extorsion of the orbits
  -- papilledema

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--papilledema

What is the difference between hypertelorism and telecanthus?

Hypertelorism refers to an abnormally increased distance between the medial orbital walls; telecanthus refers to an abnormally increased distance between the medial canthi. Which manifests as an increased interpupillary distance?

Hypertelorism

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Which manifests as an increased interpupillary distance? **Hypertelorism**

In addition to V-pattern XT, what other ocular abnormalities are often present in patients with craniosynostosis?
--Hypertelorism
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### A/V Strabismus

All three craniosynostoses have similar facies. How can they be differentiated?

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
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What strabismus pattern are craniosynostoses usually associated with?

- **V-pattern XT**

What are the three most common craniosynostoses associated with V-pattern XT?

- Crouzon syndrome
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In addition to V-pattern XT, what other ocular abnormalities are often present in pts with craniosynostosis?

- Hypertelorism
- Telecanthus
- Shallow orbits
- Extorsion of the orbits
- Papilledema

What serious sequelae can result from shallow orbits?

Shallow orbits produce proptosis, which may lead to exposure keratopathy.
A/V Strabismus

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3) Craniosynostosis

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What are the sequelae of orbital extorsion?
The location of the rectus muscles are extorted as well. For example, the medial recti are located in the superonasal orbit. Thus, when the eyes adduct they also elevate, giving the impression of IO overaction (called pseudo-IO overaction).

Orbital extorsion contributes to the overall V-pattern XT.
A/V Strabismus

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--papilledema

Why do craniosynostosis patients get papilledema?
Premature suture closure leads to elevated ICP, thereby producing papilledema.

All three craniosynostoses have similar facies. How can they be differentiated?

Crouzon syndrome: Characteristic facies
Apert syndrome: Facies + syndactyly of hands and feet
Pfeiffer syndrome: Facies + broad thumbs and broad big toes

In patients with craniosynostosis, what other ocular abnormalities are often present in pts with craniosynostosis?

Why do craniosynostosis patients get papilledema?
What strabismus pattern are craniosynostoses usually associated with? V-pattern XT

What are the three most common craniosynostoses associated with V-pattern XT? Crouzon syndrome, Apert syndrome, Pfeiffer syndrome

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In addition to V-pattern XT, what other ocular abnormalities are often present in pts with craniosynostosis? Hypertelorism, telecanthus, shallow orbits, extorsion of the orbi, papilledema

Why do craniosynostosis patients get papilledema? Premature suture closure leads to elevated ICP, thereby producing papilledema.
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. It occurs in about 20% of strabismus cases and can be secondary to:

1) Oblique dysfunction
2) Horizontal or vertical rectus dysfunction
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A-pattern strabismus is associated with another congenital condition involving abnormal closure of the skeleton housing the CNS—what is that condition?
Spina bifida

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Mnemonics:
- 'Patients with Apert syndrome can’t get their fingers and toes apert’ (apart)
- ‘Michelle Pfeiffer has huge thumbs and toes’
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A/V Strabismus
An A or V pattern strabismus is simply one that changes magnitude in up- and downgaze. Occurs in about 20% of strabismus cases. Can be secondary to: 

Management of A/V pattern strabismus

--Correct oblique overaction if present

--Focus on primary and reading positions
--Plan and correct the horizontal deviation independently

MALE:
Transpose the medial recti toward the apex, and the lateral recti toward the empty space.
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**Q**

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**Diagram:**
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