Hello #MedTwitter.

This month’s @ASPNeph Renal Pathology webinar is all about #IgAVasculitis #IgAVN formerly known as #HSP.

Urine for a treat!

#nephtwitter

Let’s do a quick poll! Iga Vasculitis is most common in which age group?

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A: <10 years, about 90% of cases of IgA Vasculitis are seen in children under 10 🍳
Let's talk numbers-

1. Kidney involvement in 30-50%
2. Kidney involvement appears within 6 weeks in 91%
3. IgA Vasculitis preceded by URI in 50%
4. If nephro findings, 10% progress to ESRD/severe CKD in 10 years

PMID: 139081 PMID: 32356414 PMID: 32060820
What's with the two names? PMID: 32356414

HSP 👆 Johann Schönlein 🧑 and Eduard Henoch 🤸‍♂️ made the first detailed analysis of this disease.

IgA Vasculitis 👇 Based on IgA deposited in blood vessel walls.

Check this article out on the two terms:

https://libgallay.com/2021/01/13/iga-vasculitis-terms/

5/
Tetrad of findings:
⚡️ Palpable purpura
⚡️ Joint pain and/or swelling
⚡️ GI issues- pain, intussusception, hematochezia
⚡️ Renal Involvement- hematuria, proteinuria, elevated creatinine

Uptodate
How about another question?!

Can we prevent kidney disease associated with IgA vasculitis? 😊🏥🏥

A: Sadly, No...

sadly 😞

Evidence suggests that steroids early in IgA vasculitis don’t prevent kidney involvement.

PMID: 26258874
We still aren't sure why IgA vasculitis happens but we have some ideas...

PMID: 23684700

Bacteria, viruses, and protozoa suggested as possible triggers:

<table>
<thead>
<tr>
<th>Type of pathogen</th>
<th>Etiologic agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacteria</td>
<td>Group A beta-hemolytic <em>Streptococcus pyogenes</em></td>
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<tr>
<td></td>
<td><em>Neisseria meningitidis</em></td>
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<td></td>
<td><em>Mycoplasma pneumoniae</em></td>
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<td><em>Bartonella henselae</em></td>
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<td><em>Helicobacter pylori</em></td>
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<td><em>Salmonella enteritidis</em></td>
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<td><em>Mycobacterium tuberculosis</em></td>
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<td><em>Staphylococcus aureus</em></td>
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<td><em>Chlamydophila pneumoniae</em></td>
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<td><em>Campylobacter jejuni</em></td>
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<td></td>
<td><em>Kingella kingae</em></td>
</tr>
</tbody>
</table>
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Some genes may predispose children:
PMID: 23684700

<table>
<thead>
<tr>
<th>Gene</th>
<th>Gene name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLA gene family</td>
<td>HLA-DRB1*01</td>
</tr>
<tr>
<td></td>
<td>HLA-DRB1*11</td>
</tr>
<tr>
<td></td>
<td>HLA-DRB1*13</td>
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<tr>
<td>Genes involved in the synthesis of inflammatory and anti-inflammatory proteins</td>
<td>Genes involved in the regulation of endothelial function</td>
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<tr>
<td><strong>HLA-A*26(<em>2601), HLA-B</em>35(<em>3503), HLA-B</em>52</strong></td>
<td></td>
</tr>
<tr>
<td>**HLA-B<em>35 (<em>3503)</em></em></td>
<td></td>
</tr>
<tr>
<td><strong>HLA-A2, HLA-A11, HLA-B35</strong></td>
<td></td>
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<tr>
<td><strong>MEFV</strong></td>
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<tr>
<td><strong>IL8</strong> (polymorphic allele A in the interleukin 8 gene)</td>
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<tr>
<td><strong>IL8</strong> (2767 A/G polymorphism in the interleukin 8 gene)</td>
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<tr>
<td><strong>IL1RN</strong> (polymorphic allele 2 [ILRN*2] in the interleukin 1 receptor antagonist gene)</td>
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<tr>
<td><strong>IL1</strong> (− 511 C/T polymorphism in the interleukin 1-beta gene)</td>
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<tr>
<td><strong>TGF</strong> (TT genotype of the C-509T polymorphism in the transforming growth factor-beta promoter gene)</td>
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<tr>
<td><strong>ACE</strong> (D/I polymorphism in the intron 16 of the angiotensin converting enzyme gene)</td>
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<tr>
<td><strong>AGT</strong> (M235T mutation in the angiotensinogen gene)</td>
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<tr>
<td><strong>NOS2A</strong> (CCTTTn polymorphic region of the gene)</td>
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</tbody>
</table>
What causes IgA Vasculitis??

Hastings et al. recently published an update on the pathogenesis of IgA vasculitis with nephritis. Check out their 4 hit hypothesis:

PMID: 33818625
Hit #1
Elevated circulatory Gd-IgA1

Hit #2
Production of IgG autoantibodies

Hit #3
Formation of IgG-Gd-IgA1-containing circulating immune complexes

Hit #4
Mesangial deposition and glomerular injury

IgA1 complexes
Mesangial cell
Podocyte

Proliferation
ECM production
Cytokines
Growth factors

Cytokines
Diagnosis- usually clinical manifestations
 userModelIcon  Not obvious? userModelIcon  Not sure? userModelIcon  Don't know?
A skin biopsy can help! userModelIcon
PMID 9366584

Leukocytoclastic vasculitis in postcapillary venules with IgA deposition in small blood vessels of superficial dermis.
What about a kidney biopsy? 🚚
Who gets one??
- Nephrotic-range proteinuria
- Elevated creatinine
Kidney biopsy findings:

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LM: mesangial proliferation ➔ severe crescentic glomerulonephritis

IF: IgA deposition in the mesangium

EM: electron-dense deposits in mesangial areas, occ extends into peripheral capillary loops
The ISKDC classification has long been used to evaluate severity of kidney involvement on biopsy: PMID: 28197887
The Oxford MEST-C classification used for IgAN is also being used more and more in IgA vasculitis:

What is reported on your biopsy reports?
17/
Monitoring for kidney involvement in IgA vasculitis is very important. Children should have a urine dipstick performed weekly for 6 months (97% of children with IgA Vasculitis who develop renal involvement do so within 6 months, 1st morning void preferred).

Uptodate

IT’S VERY IMPORTANT

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To finish things off:

How do we treat? 🌻💉🏥
Info on IgA vasculitis treatment is limited but here are some studies you can look into!

@Landmark_neph, @nephron_andon, and @dimirenal_md also created a great timeline looking into IgA vasculitis and steroids.
Refer to KDIGO 2012, European guidelines, and newer studies to get even more information on treatment.

Reply to this tweet and let us know your thoughts!
Interested in learning more?? 🕰️⏰

For a case-based discussion with pathologist and expert login to @ASPNeph website, July webinar. Answer questions to get #MOC2credits #Membereducation #ASPNFOAMgroup

@drM_sudha @menonshina @yardleyjojo @Trumidor and Smitha Vidi
23/
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and @RoshanPGeorgeMD for all your help making my first tweetorial!
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