ÇOCUKLARDA PNÖMOTORAKS, PNÖMOMEDİASTİNUM VE PNÖMOTOSEL

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Anahtar Noktalar

- Çocuk pnömotoraksları yetişkinlerden farklı özellikler taşıdığı halde, yeterli güvenilirlikte çalışma olmadığından, genelde yetişkin tedavi protokolleri ile yönetilmektedir.
- Pnömotorakslar bir ana başlık olarak yenidoğan döneminden genç erişkin yaş aralığına dek incelendiğinde, farklı yaş gruplarında farklı etiyolojik nedenler ve farklı tedavi yaklaşımlarının ön plana çıktığı görülmektedir.
- Çocuklar için henüz özel olarak yapılandırılmış standart protokollerin bulunmaması, pnömotoraks yönetiminde karmaşaya yol açmaktadır.
- Çocuk pnömotorakslarına en sık travma, mekanik ventilasyon ve diğer iyatrojenik sebepler yol açmaktadır.
- Primer spontan pnömotoraks genelde idiyopatiktir ve ergenlerde daha sık görülür.
- Ülkemizde çocuklarda gözlenen sekonder spontan pnömotoraks için en sık karşılaşılan etiyolojik neden piyojenik akciğer infeksiyonları ve tüberkülozdur.
- Ani başlayan solunum güçlüğü ve göğüs ağrılarında pnömotoraks düşünülmelidir.
- Pnömotoraks tanısı için fizik bakı ve postero-anteriyor göğüs grafisi önemlidir.
- Küçük boyutlu ve klinik bulgu vermeyen pnömotorakslar sadece oksijen desteği ile takip edilebilir.
- Büyük boyutlu veya klinik bulgu gözlenen olgularda toraks drenajı yapılmalıdır.
- Düzelmekte geciken veya nüks eden pnömotorakslarda göğüs bilgisayarlı tomografisi (BT) ile blep veya bül varlığı araştırılabilir. Bu hastalarda tedavi için torakoskopi ile beraber plevrektomi veya mekanik plörodez önerilmektedir.
- Çocuklarda pnömotoraks yönetimi için gelecekte daha güvenilir kanıtlara dayalı, randomize klinik çalışmalara ihtiyaç duyulmaktadır.
- Pnömomediastinum mediastende lümen dışı serbest hava bulunmasıdır.
- Pnömomedastinum genelde bulgu vermez. Nadiren göğüs ağrısı, solunum güçlüğü veya deri altı amfizemi görülebilir. Mediastinal plevradaki genişleme, pnömotoraksa neden olabilir.
- Pnömomedastinum çoğunlukla 3-15 gün içerisinde kendiliğinden düzelir.
- Pnömomediastinumda altta yatması olası birincil nedenler, özellikle özofagus perforasyonu, gözden kaçırılmamalıdır.
- Pulmoner pnömatoseller, akciğer parankimi içerisinde lokalize bronşiolar ve alveolar nekroz sonrası gelişen içi hava dolu, ince duvarlı boşluklardır ve pnömoni nedeniyle hastaneye yatan çocukların %2-8'inde görülür.
- Pnömatosel oluşumunun mekanizması tam olarak bilinmemektedir
- Pnömatosellerin büyük çoğunluğu haftalar veya aylar içerisinde radyolojik veya klinik sekel bırakmadan kendiliğinden düzelir.

Anahtar kelimeler: Çocuk, pnomotoraks, pnomomediastinum, pnomotosel

Pnömotoraks

Plevral (intraplevral) boşlukta hava bulunması durumuna pnömotoraks adı verilir. Normal şartlarda kapiller kandaki gazlar plevral boşluğa geçemez. Plevral boşlukta hava bulunması için şu üç durumun oluşması gereklidir: 1) alveolar boşluklar ile plevra arasında iletişim olmalı; 2) atmosfer ile plevral boşluk arasında direk veya dolaylı iletişim olmalı; 3) plevral boşlukta gaz üreten organizmalar bulunmalıdır.[1] Plevral boşluktaki hava birikerek

Özet

Pnömotoraks, plevral aralıkta hava birikmesi durumudur, spontan ve spontan olmayan iki ana farklı tipte ortaya çıkabilir. Spontan pnömotoraks, primer ve sekonder olarak ikiye ayrılır. Primer spontan pnömotoraksta akciğerde altta yatan bozukluk yokken, sekonder formu bir akciğer sorununa bağlı olarak ortaya çıkar. Spontan olmayan pnömotorakslar ise iyatrojenik veya travmatik kökenli olabilir. Çocuklarda pnömotoraksa en sık travma, mekanik ventilasyon ve diğer iyatrojenik sebepler yol açmaktadır. Primer spontan pnömotoraks genelde idiyopatiktir, subplevral yerleşimli bül ve bleplerin neden olduğu düşünülmektedir. Ülkemizde sekonder spontan pnömotoraks için en sık karşılaşılan etiyolojik neden piyojenik akciğer infeksiyonları ve tüberkülozdur. İyatrojenik pnömotoraks en sık yoğun bakım ünitelerinde yatan hastalarda mekanik ventilasyon, santral venöz kateter takılması, torasentez ya da biyopsi gibi cerrahi girişimler sonrasında gelişmektedir.

Pnömotoraksta ilk belirtiler ani başlayan göğüs ağrısı, solunum güçlüğü ve taşikardidir. Tanı, fizik bakı ve PA Akciğer radyografisi ile konur. Klinik bulgular pnömotoraks boyutu ile örtüşmeyebilir. Bulgu vermeyen küçük pnömotorakslar oksijen solutularak izlenebilir. Bulgu veren veya büyük pnömotorakslarda göğüs tüpü ile drenaj yapılmalıdır. Düzelmeyen olgularda torakoskopik cerrahi ile bül rezeksiyonu ve plöredez önerilir. Nüks olgularda da torakoskopik yaklaşım düşünülmelidir.

Pnömomedastinum mediastende lümen dışı serbest hava bulunması durumudur ve çocuklarda nadirdir. Spontan pnömomedastinum en sık astımlı çocuklarda veya kuvvetli öksürük, zorla kusma gibi Valsalva manevraları sonrasında görülür. Trakeobronşiyal lezyonlar veya spontan ya da iyatrojenik özofagus duvar perforasyonları ise daha ender görülen nedenlerdendir. Genelde bulgu vermez, nadiren göğüs ağrısı, solunum güçlüğü veya deri altı amfizemi görülebilir. Tanı radyografi ile konur. Yatak istirahati ve analjezik ile destek tedaviyle genelde 3-15 günde düzelir.

Pulmoner pnömatoseller, akciğer parankimi içerisinde gelişen içi hava dolu, ince duvarlı boşluklardır. Çocuklarda en sık bakteriyel pnömoni sonrası gelişir. Tansiyon pnömatoseller yırtılarak pnömotoraks veya bronkoplevral fistüle yol açabilir. Pnömatosellerin büyük çoğunluğu kendiliğinden düzelir.

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Sorular

1) Spontan pnömotoraksa zemin hazırlayan nedenleri yazın.
2) Pnömotoraks boyutu ile klinik bulgular arasında ilişki var mıdır? Açıklayınız.
3) Pnömotoraks olgularında girişim endikasyonları nelerdir?
4) Pnömotoraksta uygulanan konservatif ve cerrahi tedavi yaklaşımları ile nüks oranları arasında nasıl bir ilişki vardır?
5) Çocuklarda pnömomediastinumun klinik özellikleri nedir?

Yanıtlar

1) Spontan pnömotorakslar en sık dinlenme sırasında ortaya çıksa da ağırlık kaldırma, ıkınma gibi Valsalva manevralarıyla toraks içi basıncı artıran durumlar da tetikleyici etken olarak tanımlanmıştır. Primer spontan pnömotoraks tipik olarak uzun boylu, ince yapılı (ektomorf) ve 10-30 yaş arasındaki ergen ve genç yetişkin erkeklerde karşılaşılan bir durumdur.
2) Hemitoraksın %15'inin altındaki alanını etkileyen, yani, küçük boyutlu pnömotorakslar klinik bulgu vermeyebilir. Pnömotoraksın ilk bulguları ani başlayan göğüs ağrısı, solunum sıkıntısı ve taşikardidir. Çocuklarda pnömotoraks nedeniyle ortaya çıkan solunum sıkıntısının şiddeti, çocuğun yaşı, akciğer rezervi, altta yatan neden veya biriken havanın tansiyonu gibi durumlara bağlıdır.
3) Klinik bulguları hafif ve %15'ten küçük pnömotorakslar herhangi bir girişim yapmadan sadece oksijen verilerek takip edilebilir. Tüm sekonder pnömotorakslarla klinik bulgu gözlenen primer pnömotorakslarda ise girişim yapılması önerilmektedir.
4) Pnömotoraksın konzervatif tedavisinden sonra %60'lara varan oranda nüks bildirilmiştir. Cerrahi tedavi ile bül veya blep rezeksiyonu yapılan olgularda ise nüks oranı %5'lere inmektedir.
5) Çocuklarda gelişen pnömomediastinum genelde bulgu vermez ve 3-15 gün içerisinde kendiliğinden düzelir. Altta yatan organ hasarına bağlı oluşan pnömomediastinumda ise etiyolojiye yönelik tedavi gerekir.