

## Kritik Travma Hastalarında Kan Ürünleri replasmanının yönetimi

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Travma durumunda, kanama nedeniyle dolaşımdaki kan hacminin kaybı, şokun en yaygın nedenidir. Yetersiz oksijenasyon, mekanik obstrüksiyon (kardiyak tamponad, tan-siyon pnömotoraks), nörolojik disfonksiyon (yüksek omurilik yaralanması) ve kardiyak disfonksiyon diğer potansiyel nedenlerdir (1). Hemorajik şok, travma hastalarında yaygın ve sıklıkla tedavi edilebilir bir ölüm nedenidir ayrıca travmaya bağlı ölümlerin önde gelen nedeni olup, travmatik beyin hasarından sonra ikinci sıradadır (2).

### Kanamamanın Sınıflandırılması

Amerikan Cerrahlar Koleji tarafından hazırlanan İleri Travma Yaşam Desteği (İTYD) kılavuzu, şok durumunun erken bulgularını belirtmek için kanama durumunu aşağıda sunulan Tablo 1'de 4 sınıfta tanımlamaktadır (3). Klinisyenler, kan basıncındaki önemli düşüşlerin genellikle Sınıf III kanama gelişene kadar ortaya çıkmadığını ve bu meydana gelmeden önce hastanın kan hacminin yüzde 30'a kadarının kaybedebileceğini unutmamalıdır.

**Tablo 1. Kanama miktarına göre travma hastalarının sınıflandırılması**

<b>Sınıf I</b>	Yüzde 15'e varan kan hacmi kaybıdır. Kalp atış hızı minimum düzeyde yükselir veya normaldir ve kan basıncında, nabız basıncında veya solunum hızında değişiklik olmaz.
<b>Sınıf II</b>	Yüzde 15 ila 30'luk bir kan hacmi kaybı olduğunda ortaya çıkar ve klinik olarak taşikardi (kalp hızı 100 ila 120), takipne (20 ila 24 solunum hızı) ve sistolik kan basıncında (SKB) anlamlı değişme olmamasına rağmen nabız basıncında azalma olarak kendini gösterir. Cilt serin ve nemli olabilir ve kapiller dolum gecikebilir. Bu orta derecede kanama olarak kabul edilir.
<b>Sınıf III</b>	Yüzde 30 ila 40 kan hacmi kaybı olduğunda ortaya çıkar, bu da kan basıncında önemli bir düşüşe ve zihinsel durumda değişikliklere neden olur. Herhangi bir hipotansiyon (SKB 90 mmHg'den az) veya kan basıncında, hastanın geliş sırasındaki ölçümünün yüzde 20 ila 30'undan daha fazla düşüş endişe nedenidir. Azalan kaygı veya ağrı böyle bir düşüşe katkıda bulunabilse de, klinisyen aksi kanıtlanana kadar bunun kanamaya bağlı olduğunu varsaymalıdır. Kalp atış hızı ( $\geq 120$ atım/dk) ve solunum hızı belirgin şekilde yükselirken idrar çıkışı azalır. Kapiller dolum gecikir. Hem sınıf III hem de sınıf IV şiddetli kanama olarak kabul edilmelidir.
<b>Sınıf IV</b>	Kan basıncında ve zihinsel durumda önemli depresyona yol açan yüzde 40'tan fazla kan hacmi kaybı içerir. Hastaların çoğu hipotansiftir (SKB 90 mmHg'den az). Nabız basıncı daralmış ( $\leq 25$ mmHg) ve taşikardi ( $>120$ atım/dk) vardır. İdrar çıkışı minimaldir veya yoktur. Cilt soğuk ve soluktur ve kapiller dolum gecikir.

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risinde 5,1'den 1,9'a düştüğünü göstermişlerdir(31). Elbetteki PCC TDP'ye göre oldukça maliyetli bir tedavi yöntemidir ancak kanama komplikasyonları ile kıyaslayınca, kısa sürede etki etmesi bakımından toplam maliyeti azaltmaktadır.

Andexxa (coagulation factor Xa (recombinant), inactivated-zhzo), rivaroxaban veya apixaban ile tedavi edilen hastaların tedavisinde kullanılan, hayatı tehdit eden veya kontrolsüz kanama nedeniyle antikoagülasyonun tersine çevrilmesi gerektiğinde kullanılan bir ilaçtır.

Bu kontrolsüz kanamaları ile apixaban veya rivaroxabanla tedavi edilen hastalar için ilk onaylı panzehirdir.

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