BÖLÜM
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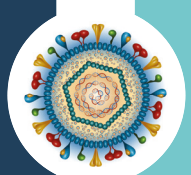
Papillomaviridae ve Parvoviridae



Fırat DOĞAN [1]

PAPILLOMAVIRIDAE GENEL BİLGİLER

Papillomaviruslar son yıllarda, çiftlik hayvanlarından olan sığır, koyun ve keçilerde önemli ekonomik kayıplara neden olarak ön plana çıkmaktadır. Veteriner hekimlikte özellikle sığır papillomaviruslarının her geçen gün yeni alt tiplerinin ortaya çıkması ve türler arası geçişlerin olduğu belirtilmesi nedeniyle önem arz etmektedir. Papillomaviruslar ağrılı deri ve meme lezyonlarının yanı sıra deri kalitesinin bozulması, meme ucunun tıkanması, meme ucunda kanamaya neden olması, sağım makinalarının kullanılmasında hayvanlara acı vermesi ve memedeki lezyonlar nedeniyle süt veriminin azalması ve mastitis olguları nedeniyle ekonomik kayıplara neden olmaktadır. Papillomavirusların meydana getirdiği lezyonlar genellikle iyi huylu olsa da bazı tiplerin oluşturduğu lezyonlar kötü huylu olabilmektedir. Bu yüzden papillomavirusların takibinin yapılması ve gerekli önlemlerin alınması gerekmektedir.

RUMİNANTLARIN PAPİLLOMAVİRUS ENFEKSİYONLARI

Evcil ruminantlardan özellikle sığırlarda papillomaviruslar üzerine yapılmış bir çok çalışma bulunmakla birlikte özellikle koyun ve keçilerde de son yıllarda önemli çalışmalar yapılmakta ve her geçen gün yeni alt tiplerin varlığı ortaya konulmaktadır. Ruminant yetiştiriciliği daha çok ekonomik amaçlı yapılmaktadır. Papillomavirusların yapmış oldukları etkilerden dolayı da ekonomik önemi olan hastalıklardandır.

Etiyoloji

Papillomaviruslar ICTV tarafından *Papillomaviridae* ailesi içerisinde sınıflandırmaktadır. Papillomaviruslar zarfsız, çift iplikçikli (dsDNA), sirküler DNA' ya sahip viruslardır. Papilomavirusların genomu yaklaşık 8000 nükleotitten oluşmaktadır. Papillomavirus genomu E (Early), L (Late) ve LCR (Long Coding Region) olmak üzere üç gen bölgesine ayrılmaktadır. E gen bölgesi E1, E2, E3, E4, E5, E6, E7 ve E8 olmak üzere sekiz adet ORF içerir. ORF bölgelerinden E1, E2, E4 replikasyon proteinlerini kodlarken E5, E6 ve E7 onkoproteinleri kodlamaktadır. E2 proteini aynı zamanda E6 ve E7 proteinleri için transkripsiyonel düzenleyicisi olarak da görev yapar. E1 gen bölgesi papillomaviruslarda en önemli korunan bölgelerden biridir. E4 proteini ise PV'lerin en fazla eksprese edilen proteinidir. Bu nedenle E4, epidermisin suprabazal ve granülosum katmanlarında kolaylıkla saptanır ve PV'lerin patojenik aktivitesinin önemli bir işareti olarak kabul edilir.

L gen bölgesi papillomaviruslarda en korunaklı gen bölgesidir. Bu nedenle papillomavirusların sınıflandırılmasında L1 gen bölgesi önemli yer tutmaktadır. L geni iki adet kapsid proteinini (L1, L2) kodlamaktadır. L gen bölgesi hücre zarında bulunan heparin sülfat reseptörlerine kapsidin tutunmasını sağlayarak viral enfeksiyon mekanizmasında merkezi bir rol oynar. Sadece BPV-4' te üçüncü bir yapısal

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