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ÖNSÖZ

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Bilimsel ve düşünsel çalışmaların kalıcı belgeleri sayılan kitaplar, bilgi kayıt ortamı olarak yüzlerce yılın tanıklarıdır. Matbaanın icadıyla varoluşunu sağlam temellere oturtan kitabın geleceği, her ne kadar yeni buluşların yörüngesine taşınmış olsa da, daha uzun süre hayatımızda yer edineceği muhakkaktır.

Akademisyen Yayınevi, kendi adını taşıyan **"Bilimsel Araştırmalar Kitabı"** serisiyle Türkçe ve İngilizce olarak, uluslararası nitelik ve nicelikte, kitap yayımlama sürecini başlatmış bulunmaktadır. Her yıl Mart ve Eylül aylarında gerçekleşecek olan yayımlama süreci, tematik alt başlıklarla devam edecektir. Bu süreci destekleyen tüm hocalarımıza ve arka planda yer alan herkese teşekkür borçluyuz.

Akademisyen Yayınevi A.Ş.

İÇİNDEKİLER

Bölüm 1

BÜYÜKBAŞ HAYVAN KAYNAKLI BAKTERİYEL ZOONOZ HASTALIKLAR: MULTİDİSİPLİNER BİR DEĞERLENDİRİLME

Sema İŞİSAĞ ÜÇÜNCÜ[1]
Burak GÖKÇE[2]

Bu derlemede büyükbaş hayvanlardan kaynaklanan ve özellikle veteriner hekimler ile teknisyenleri için ciddi sağlık sorunları oluşturabilen bakteriyel zoonozlar, son on yıla ağırlık verilerek gözden geçirilen literatur bilgileri ışığında ve iş sağlığı-güvenliği yaklaşımıyla ele alınmış, böylece farklı disiplinlerde konuya ilgi duyan araştırmacılar için genel bir başvuru kaynağı oluşturulması hedeflenmiştir.

Çok geniş bir tanımla zoonozlar, diğer hayvanlardan ve insanlardan insanlara geçerek çeşitli enfeksiyon hastalıkları oluşturan, biyolojik açıdan da kendini çoğaltabilen patojen proteinler olan prionlar, ayrıca virusler, bakteriler, funguslar, mikro ve makro parazitler olarak farklı sistematik kategorilerde incelenen organizmalardır. Bilinen insan patojenlerinin % 60'ından fazlasının, ayrıca ilk kez görülen ya da yeniden ortaya çıkan bulaşıcı hastalıkların %75'inin etmeni olarak kaydedilirler (1). Görülme sıklıkları, yayılma hızları, tanımlanmış olup olmamaları, insan ve hayvan sağlığı üzerindeki etkileri ve ekonomik etkileri olarak belirlenen beş ayrı ölçütle değerlendirilirler (2). Dünya genelinde

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kullanım oranları da ilk grupta yine %1.2 (1 kişi), ikinci grupta %1.9 (12 kişi) olarak bildirilmektedir [113]. Bir diğer araştırma kapsamında 120 laborant ve veteriner sağlık öğrencisine uygulanan ankette, zoonotik hastalıklar hakkındaki farkındalığın, İş Sağlığı ve Güvenliği dersini başarıyla bitirenlerde dersi almayanlara göre %17.14 daha yüksek olduğu görülmüştür [42]. Veteriner hekimlikte iş sağlığı ve güvenliğine yönelik bazı lisansüstü bitirme projeleri de mevcuttur [44]. Bu tür çalışmaların çoğalmasıyla veri tabanının metaanaliz yapılabilecek genişliğe ulaşması beklenmektedir.

İnsan ve toplum sağlığını korumak, iş sağlığı ve güvenliği kültürünü yerleştirip geliştirmek için, veteriner hekimlik özelinde ve konuyla ilgili diğer iş kollarında yoğun ve sürekli eğitime, ayrıca çok sıkı denetime ihtiyaç olduğu açıktır. Bu gereksinimin giderilmesinde disiplinler arası çalışmalar ve konuya farklı açılardan getirilecek yaklaşımlar halk sağlığı ve çalışanların sağlığı anlamında büyük önem taşımaktadır. Ülkemizde iş sağlığı ve güvenliği alanında bilgi birikimi arttıkça yukarıda kaydedilenlere benzer yöntemlerle yapılacak çalışmaların da çoğalması umulmaktadır. Bu konuda üniversitelere, Sağlık Bakanlığına, Veteriner Hekimler Odalarına ve Türk Veteriner Hekimleri Birliğine büyük görev düşmektedir.

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Bölüm 2

İNEKLERDE PERİPARTURİENT DÖNEMDE SİTOKİN DÜZEYLERİNE ETKİ EDEN FAKTÖRLER

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GİRİŞ

Periparturient dönem (Geçiş dönemi, transition period), doğumun 3 hafta öncesi ve 3 hafta sonrasını içine alan, sağlık, üretim ve süt ineklerinin karlılığı açısından kritik öneme sahip dönem olarak adlandırılmaktadır [(1)].

Süt sentezinin başlaması ve düşük yem tüketimiyle birlikte enerji ve besin ihtiyacının artması, periparturient dönemdeki ineklerde Negatif Enerji Dengesi (NED) ve mikro besin eksikliklerinin ortaya çıkmasına sebep olur. Negatif enerji dengesi, ineklerin vücut yağının esterleşmemiş yağ asitleri (NEFA) ve sonra da Beta-Hidroksibütirik Asite (BHBA) dönüşmesine ve kanda birikmesine sebep olur. Her ne kadar bu değişiklikler yüksek süt verimli ineklerde normal bir süreç olsa da inekler bu metabolik zorluğa uyum sağlayamazsa, metabolik ve bulaşıcı hastalıklar oluşmaya başlar. Bu durum da periparturient dönem ve sonrasında üretkenlik ve üreme verimliliğinin düşmesine yol açar. Periparturient dönemdeki ineklerin biyolojisinin anlaşılmasındaki

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Bölüm 3

MEME SAĞLIĞI ÜZERİNE VİRÜSLERİN ETKİLERİ

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GİRİŞ

Oldukça maliyetli hastalıklardan biri olan mastitis süt veriminin düşmesi, tedavi masraflarının yüksek olması, enfekte sütlerin dökülmesi, sürüden hayvanın çıkarılma oranının fazla olması, nüks oranının yüksek [(1,2)] ve reprodüktif performansın düşmesine neden olduğu için süt sığırcılığı işletmelerinde oldukça önemli bir yere sahiptir [(3)]. Mastitisin etiyolojisine bakıldığında Tablo 1'de de gösterildiği gibi bakteri, virüs, maya gibi birçok enfeksiyöz ajan etkili olmaktadır. Bunun yanı sıra fiziksel travmalar ve hayvana bağlı faktörlerin de mastitislerin oluşmasında etkisi vardır. Mastitisin oluşmasında en önemli etkenler bakteriyel ajanlar olmasına rağmen, meme sağlığı üzerinde oldukça önemli bir yer tutan virüsler de göz ardı edilmemelidir [(4,5)].

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rın da dahil olmasıyla dolaylı yoldan mastitise neden olurlar. Sığır enterovirüs de sütten izole edilen ve süt somatik hücre sayısını arttıran diğer bir etkendir [4,6].

SONUÇ

Mastitis, süt sığırcılığında ciddi ekonomik kayıplara neden olmaktadır. Mastitisin etiyolojisi üzerine yapılan araştırmalar bakteriyolojik yönde yoğunlaşmaktadır. Ancak, yapılan araştırmalar göstermektedir ki, bakteriyolojik kaynaklı olmayan ve nedeni tam olarak bilinmeyen mastitislerde vardır. Nedeni bilinmeyen mastitislerde virüslerin de büyük pay sahibi olduğu unutulmamalıdır. Virüsler sığırlarda meme sağlığı açısından doğrudan bir mastitis oluşturmasa da, immün sistemi baskılamak gibi diğer sistemler üzerine ciddi şekilde etki ederek ve memede lezyonlar oluşturarak primer mastitis etkeni olan bakteriyel ajanlar için mastitise zemin oluşturmak kaydıyla ciddi ekonomik kayıplara neden olmaktadırlar. Bu etkenlerin tedavisinin olmaması da göz önüne alınarak, etkenlere karşı mücadelede koruyucu hekimlik esastır ve gerekli koruma-kontrol programları yapılmalıdır. Ayrıca, koruma-kontrol programları kapsamında immün sistem güçlendirici uygulamalar yapılmalıdır.

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Bölüm 4

KİTİN-KİTOSAN: HAYVAN YETİŞTİRİCİLİĞİ VE SAĞLIĞINDA KULLANIMI

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Kitin ve Kitosan

Kitin biyopolimer yapıda, dünyada selülozdan sonra en yaygın olarak bulunan ikinci maddedir. Deniz kabuklu su ürünlerinin (yengeç, karides gibi) ana bileşenidir. Ayrıca, böceklerin iskelet, mantarların da hücre duvarlarının yapısında yer almaktadır. Dünyadaki kitin üretimi karidesten, çeşitli deniz kabuklularından, mantarlardan ve istiridyelerden sağlanmaktadır (1). Böcek kabuklarının yapısında yaklaşık % 24, yengeçte % 17 ve karideste ise % 32 oranında kitin bulunmaktadır (2). Yapısında kitin bulunan bütün canlıların her yıl ortalama 10 milyar ton kitin üretme kapasitesine sahip olduğu bildirilmektedir (3).

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Bölüm 5

NUTRİSYONEL GENOMİK VE VETERİNER HEKİMLİK

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GİRİŞ

Beslenme araştırmaları, yakın zamana kadar gıdalardaki besin maddelerinin eksiklikleri ve buna bağlı olarak insan sağlığının bozulması konuları üzerinde yoğunlaşmıştı. Ancak genomiklerin ortaya çıkışı, genomların yapısı, bileşimi ve işlevleri hakkında bilimsel verilerin elde edilmesi, besin maddelerinin bunları tüketen canlıların gen ve protein ekspresyonunu nasıl değiştirdiğine ilişkin anlayışı arttırarak beslenme konusuna yeni bir bakış açısı getirmiştir [(1)].

Canlıların özellikle insan ve hayvanların sahip olduğu genetik yapı, beslenmeye bağlı olarak ortaya çıkan hastalıkları azaltan ya da arttıran bir faktördür (Şekil 1). Genetik yapıyı oluşturan genlerin sindirimdeki rolü ve besin öğelerinin oluşturduğu kalıtsal değişiklikler, besinlerin bireye özgü özellikler taşıdığını ve bu nedenle

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- Pet hayvanlarının insanlar gibi daha uzun, sağlıklı ve kaliteli yaşaması mümkün olabilecektir,
- Hatta hem insan hem de hayvanlar için bireysel diyet uygulamaları yaygınlaşabilecektir.

Gelecek için büyük umutlar vadeden bu alandaki çalışmaların multidisipliner ve yaygın olarak sürdürülmesi insanlığa önemli kazanımlar sağlayacaktır. Ayrıca, bu konularla ilgili veteriner hekimlik alanında elde edilecek başarılar da insan hekimliğine katkı sunacaktır.

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