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FAST FACTS ABOUT
POTOMAC HORSE FEVER
(PHF, Ditch Fever)

DEFINITION

PHF, A DISORDER OF THE LARGE INTESTINE, WAS RECOGNIZED IN 1979 IN THE POTOMAC RIVER BASIN. THE PHF AGENT IS PRESENT IN WATER WORLDWIDE, AND HORSES KEPT CLOSE TO WATER ARE AT HIGHER RISK, BUT NOT ALL PHF CASES ARE KEPT ADJACENT TO BODIES OF WATER. PHF IS SEASONAL, WITH CASES OCCURRING BETWEEN LATE SPRING AND EARLY AUTUMN. IT IS MOST PREVALENT IN THE EASTERN UNITED STATES, BUT ALSO IS FOUND IN OTHER AREAS OF THE COUNTRY, IN CANADA, AND EUROPE. ALL AGES CAN BE INFECTED; HOWEVER, FOALS SEEM TO BE THE LEAST INFECTED.

CAUSE

THIS DISORDER IS CAUSED BY A BACTERIUM NEORICKETTSIA (FORMERLY EHRLICHIA) RISTICII. THE BACTERIA ENTER CERCARIAE (LARVAL FORM OF FLUKES OR PARASITIC FLATWORMS) WHICH ARE WITHIN SNAILS. THE CERCARIAE ARE SECRETED BY THE SNALS INTO WATER. CERCARIAE ALSO INFECT THE LARVA OF MAYFLIES AND CADDIS FLIES IN FRESH WATER. WHEN INFECTED FLY LARVA MATURE INTO INFECTED ADULT FLIES, THEY CAN BE INGESTED BY HORSES WHILE GRAZING OR EATING FEEDSTUFFS. PART OF THE LIFE CYCLE MAY INVOLVE TRAVEL THROUGH CERTAIN BIRDS AND BATS.

CLINICAL SIGNS

SIGNS DEVELOP 10-15 DAYS AFTER INFECTION. COMMON SYMPTOMS INCLUDE DEPRESSION, COLIC, ANOREXIA, DIARRHEA, EDEMA, LOW WHITE BLOOD COUNTS, AND DEHYDRATION. MARES MAY ABORT. SYMPTOMS CAN RANGE FROM VERY MILD TO SEVERE AND BE COMPLICATED WITH A RESULTING CASE OF LAMINITIS.

DIAGNOSIS

THE CLINICAL SIGNS AND A POSITIVE PCR TEST ARE USED TO CONFIRM. THE PCR TEST USES WHOLE BLOOD AND DETECTS THE INFECTIOUS AGENT BY AMPLIFYING A SPECIFIC GENE IN THE AGENT. THE TEST WORKS ON SOME TISSUES AS WELL AND CAN BE COMPLETED IN 24 HRS. OTHER BLOOD TESTS CHECK FOR PHF ANTIBODIES, TAKE ABOUT A WEEK, AND CAN YIELD FALSE POSITIVES.

TREATMENT

TREATMENT INVOLVES FLUID AND ELECTROLYTE REPLACEMENT THERAPY, ADMINISTRATION OF OXYTETRACYCLINE, AND NONSTEROIDAL ANTIINFLAMMATORY DRUGS IF LAMINITIS SUSPECTED.

PROGNOSIS

IF SYMPTOMS ARE CAUGHT EARLY, MANY HORSES RESPOND IN 24 HOURS AND CAN HAVE A DRAMATIC TURNAROUND. APPROXIMATELY 25-30% OF PHF CASES EXHIBIT LAMINITIS.

PREVENTION

AVOID PASTURES WHERE HORSES ARE WALKING IN WATER OR DRINKING THE WATER UNTIL THEY HAVE A CHANCE TO DRY OUT. ELIMINATING SNAILS WOULD HELP, BUT IS NOT EASILY DONE.

VACCINATION

VACCINES HAVE LIMITED EFFECTIVENESS, BUT MAY BE HELPFUL IN DECREASING THE SEVERITY OF INFECTION OR PREVENTING DEATH.

-Dr. Lyda W. Denney-