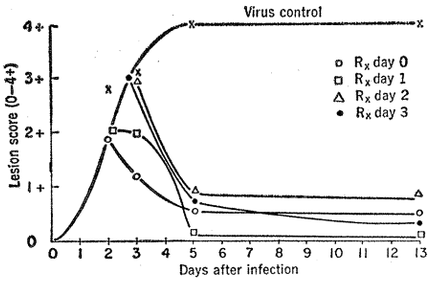


Fig. 3. Response of herpetic keratoconjunctivitis to intravenous polyinosinic:polycytidilic acid; $R_x$ is treatment.

peated administration shortly after onset of virus-induced murine leukemia retarded progression of the disease but was not curative (*16*). Intraocular injection of endotoxin to induce interferon was protective prophylactically (*17*, *18*) and may have resulted in a minimal therapeutic effect, although other effects of endotoxin may have also been involved (*18*). In this study, as well, it is possible that herpes infection resulted in low-level production of interferon (*11*). It had previously been proposed that application of amounts of interferon greater than those that were available at that time would lead to effective therapy (*1–3*, *5*, *19*). The levels and duration of circulating interferon observed in the present study are unusually high (*14*).

Extension of our therapeutic findings to other virus infections is necessary to establish conclusively the therapeutic role of interferon. Such demonstrations seem plausible because herpes simplex virus is only moderately sensitive to the antiviral action of interferon in rabbit cells (*20*). Since there are many viruses that are more sensitive to the antiviral effect of interferon, it seems possible that effective therapy of these infections will be demonstrated.

The therapeutic effect of interferon inducers in established herpetic infection of the rabbit eye raises the possibility of similar application to herpetic infections of the human eye. In inducing viral resistance in human fibroblasts, PI:C is highly active (*21*, *22*). This animal model has been successfully employed in the development of iododeoxyuridine therapy of superficial herpetic infections of the human eye (*23*). Although iododeoxyuridine is an excellent therapeutic agent, it has certain limitations because of its inactivity in nonsurface infections of herpes simplex virus and the existence of drug-resistant strains of virus. Furthermore, it has a narrow antiviral range. Therefore, it seems reasonable to expect that inducers of the interferon system may find application in human eye infections.

Evidence that the therapeutic effectiveness of PI:C is largely attributable to induction of the interferon mechanism comes from the previous (*11*) and present demonstration of high levels of circulating interferon in rabbits receiving this inducer, and the demonstration of strong activation of the interferon mechanism in four different rabbit tissue cultures (kidney, spleen, thymus, and embryo) treated with PI:C (*24*).

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## Airborne Pheromones

Whitten, Bronson, and Greenstein (*1*) described an estrus-inducing pheromone of male mice which is transported by the movement of air currents. Medieval Europeans believed that female birds responded to similar airborne stimuli. The 12th-century *Bestiary*, translated by T. H. White (*2*) has this to say of Perdix, the partridge:

"Desire torments the females so much that even if a wind blows toward them from the males they become pregnant by the smell."

This belief can be traced to the writings of Aristole (*3*) who described unfertilized eggs as *hypenemia* or zephyria.

"They are mistaken who say that hypenemia (barren eggs) are the remains of former acts of sexual intercourse; for young birds, as fowls and geese have been frequently observed to lay such eggs without any sexual intercourse.—The hypenemia are by some persons called zephyria, because they say that birds receive these winds in the spring."

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16 September 1968

## Obsidian Dating Revisited

In their recent article, Meighan *et al.* (*1*) have reported on the use of obsidian dating as applied to West Mexican archeology. In their report, they use a linear rate of hydration (years/micron). In a footnote they comment that we do not agree with this linear hydration rate on theoretical grounds. We wish to point out that our disagreement is based not on theoretical grounds, but on experimental determination of hydration rate (*2*) as well as on an empirical approach similar to that used by Meighan *et al.*

Other archeologists working in various parts of the world (*3*) have also found that the obsidian hydration follows the relation (thickness)$^2$ = $k$ time (microns$^2$/yr).