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# An Agent for the Palliative Treatment of Neoplastic Effusions

## Quinacrine (Atabrine) Hydrochloride

Quinacrine hydrochloride is often effective in the palliation of recurrent pleural effusions and ascites associated with certain neoplastic diseases. Adverse reactions are mild and transient.

Quinacrine hydrochloride, which had much use during World War II as an antimalarial agent, is now seldom used for this purpose. However, it is of value in the treatment of some tapeworm infestations and in symptomatic giardiasis. Recently, it has been shown to be useful in the management of recurring pleural and peritoneal neoplastic effusions. In a limited number of patients, it has been equivalent in effectiveness to the radioactive isotopes and alkylating agents. Quinacrine may have an advantage since it does not have the hazards of radiation or the systemic toxic effects that are associated with the use of these other agents.

Quinacrine is instilled intrapleurally for effusions secondary to metastatic carcinoma of the breast or lung, and in lymphoma or mesothelioma. It is given intraperitoneally for the treatment of ascites secondary to carcinoma and mesothelioma of the ovary, colon, pancreas, stomach, and breast. Like other agents used in the treatment of these conditions, quinacrine produces symptomatic improvement, but does not modify the underlying neoplastic disease. It inhibits effusion by producing an inflammatory reaction on the serosal surface, thus causing a fibrous thickening or adhesive pleuritis.

### Adverse Reactions and Precautions

Transient toxic symptoms occur in about 60% of patients receiving quinacrine. The most common adverse effects are **fever** and **regional pain**. Increased temperature appears four to eight hours after administration; it usually lasts only a few hours but has persisted as long as ten days. **The height and duration of the fever are dose-related.** **Chest or abdominal pain** often occurs shortly after

Scientific data on quinacrine hydrochloride were supplied to the Council by Winthrop Laboratories, New York. Address reprint requests to Secretary, Council on Drugs, American Medical Association, 535 N Dearborn St, Chicago 60610.

administration and is believed to be due to the inflammatory response quinacrine induces in the pleural or peritoneal serosa; **temporary dyspnea** also may occur. The pain can be controlled with analgesics. Because of the cumulative effect of quinacrine in tumor cells, small doses given frequently may provide relief without producing fever or local pain.

Nausea and vomiting have been noted occasionally, and **ileus has occurred when doses of 800 mg or more were given**. Several patients experienced **transient hallucinatory episodes**. A single case of yellow skin pigmentation, similar to that seen in the therapy of malaria, has been observed.

The drug must be used with caution in patients with reduced ventilation or dyspnea, particularly in the presence of bilateral effusion.

### Dosage and Preparations

**Route of Administration-Intracavitary** (intrapleural, intraperitoneal) instillation.

Dosage-Before administering quinacrine hydrochloride, some of the pleural or peritoneal effusion fluid is first removed. Each 200 mg of drug is then dissolved in 10 ml of the effusion fluid or water for injection, and instilled into the remaining pool of pleural or ascitic fluid.

To determine the tolerance of the patient, an initial dose of 50 to 100 mg is suggested for pleural effusions, and 100 to 200 mg for peritoneal effusions. Depending on individual tolerance, 200 to 400 mg is given daily for four or five consecutive days for pleural effusions, and 400 to 800 mg is given daily for three to five consecutive days for control of ascites.

The maintenance dosage varies from 200 mg to 1 gm daily, depending on the location of the effusion and the continued tolerance of the patient.

**Chemical Name** - 3-chloro-7-methoxy-9-(1-methyl-4-diethylaminobutylamino)-acridine dihydrochloride dihydrate.

**Preparations-Injection: Powder 200 mg.**  
**Supplied by-** Winthrop Laboratories (Atabrine Hydrochloride).

**Year of Introduction-1964** (as antineoplastic agent).