



Title **Ultrafiltration for Decompensated Heart Failure**

Agency **VATAP, VA Technology Assessment Program**

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Reference VA Technology Assessment Program Brief Overview, January, 2010.
www.va.gov/vatap

Aim

To determine if ultrafiltration should be used for Veterans Affairs (VA) patients with decompensated heart failure.

Conclusions and results

Twenty-three journal articles met the inclusion criteria. Three systematic reviews and 1 reference study pertained to ultrafiltration. These articles found that ultrafiltration was safe and effective at removing excess fluid from patients with decompensated heart failure, but more research is needed to determine optimal rates of fluid removal, termination timeline, and cost effectiveness.

The remaining 19 articles explored related topics to treat or avoid decompensated heart failure. Positive outcomes have been found with techniques such as patient education for self-monitoring, telemonitoring, and discharge planning with postdischarge support.

Recommendations

Based on the available literature, it is safe to assume that the positive results of ultrafiltration observed in the United Kingdom can be transferred to the United States, but further research is recommended.

Methods

We conducted a literature search in the following databases for articles in English published between 2000 and 2010: PubMed, MEDLINE, EMBASE, INAHTA, and the Cochrane Library, using the search terms “ultrafiltration”, “decompensated heart failure”, “volume overload”, and “cardiorenal syndrome”.

Further research/reviews required

More research is needed with greater patient populations; blinded studies, if possible; follow-up beyond 2 to 3 months; outcome measurements based on quality of life and mortality; and additional independent studies. Five clinical trials are in progress comparing ultrafiltration to other treatments. One of these trials explores if kidney dysfunction can result from overzealous ultrafiltration.