Purpose:
Acetylcysteine is an acetyl-based amino acid (cysteine), which is a common anti-spasmodic and antioxidant agent. By anti-oxidation of the drug, the free radicals produced by contrast medium are removed and reduced renal injury. The advantages of lesser expense and side effect, where some studies shed a positive view on it, have made it a common drug to prevent renal toxicity caused by contrast medium in clinical practice, even though such use is not its primary indication, especially its preventive effect in acute kidney injury remains to be determined, hence as the motivation for the following discussion.

Methods:
A literature search (Figure1) was conducted using the Airiti Library, Association for Computing Machinery, CINAHL, Cochrane Library, PubMed/Medline. And use the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) as a review tool (Table1).

Results:
The result of the literature search showed that the use of acetylcysteine in patients could not effectively prevent kidney damage caused by contrast media. Even though due to the clinician's habit and the culture in clinical background for medication, the drug was still administered as prophylaxis to avoid complications derived from the use of contrast media. And, the difference in in effectiveness due to different loading doses in clinical practice still required further investigation.

Conclusion:
Since there is still no effective treatment for renal injury due to contrast media, prevention is thus more important. Before performing angiography for patients in high-risk group, it is necessary to evaluate risks and take appropriate measure. In addition, in term of cost, the insurance coverage of acetylcysteine is approximately 4 NTD. If 1200mg dose of drug were given twice per day in two days prior to examination, the cost per day per patient would be 50 NTD. Although the risk of injury for the drug is not high, the long-term use will only increase the medical cost for hospital.