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Title Iodine-131-rituximab Radioimmunotherapy for Non-Hodgkin's Lymphoma

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Reference Technology Review Report - 019/2016, online:
http://www.moh.gov.my/index.php/database_stores/store_view_page/30/291

Aim

To assess the safety, effectiveness, cost-effectiveness of I-131-rituximab RIT in patients with NHL.

Conclusions and results

Effectiveness

There was limited fair level of retrievable evidence to suggest that I-131-rituximab RIT was effective as a first line treatment for NHL. Evidence demonstrated that I-131-rituximab RIT was effective for newly diagnosed, advanced stage, symptomatic follicular NHL. The overall response rate (ORR) at three months was 99% with 88% achieving Deauville category 1 to 3

There was fair level of retrievable evidence that showed I-131-rituximab RIT was effective for treatment of relapsed or refractory NHL. However, the response rate and median survival rate varies greatly. The ORR range from 29% to 97%, complete response (CR) range from 12.5% to 77%, and partial response (PR) range from 17% to 29%. The median overall survivor range from 11.3 months to 87 months while the median progression free survival (PFS) range from 13 months to 71 months. It seems to be more effective for indolent NHL compared to aggressive NHL.

Evidence also suggest that I-131-rituximab RIT was effective when used as repeated treatment for patients with relapsed or refractory NHL including those with aggressive NHL. It was also effective when used as combination treatment for NHL with longer PFS. However, there was no study retrieved comparing the effectiveness of I-131-rituximab with other established RIT like Y-90-ibritumomab and I-131-tositumomab.

Safety

There was fair level of retrievable evidence to suggest that treatment using I-131-rituximab NHL was safe and tolerable. However, most common toxicity reported was grade III or IV haematological toxicities and hypothyroidism. Combination of I-131-rituximab RIT and high dose chemotherapy increased the toxicity. There was one treatment related mortality (5%) which occurred in patient treated with I-131-rituximab RIT plus high dose chemotherapy. A study reported that radiation exposure to carers and family members of outpatients undergoing I-131-rituximab RIT were compliance with international guidelines.

Cost /cost-effectiveness

There was no retrievable evidence on cost-effectiveness.

Recommendations

Based on this review, self-labelled I-131-rituximab RIT may be used as first line treatment for NHL, treatment for relapsed or refractory NHL, repeat treatment for relapsed or refractory NHL and as a combination treatment for NHL.

Methods

Electronic databases were searched through the Ovid interface: Ovid MEDLINE® In-process and other Non-indexed citations and Ovid MEDLINE® 1946 to present, EMBASE – 1996 to November 2016, EBM Reviews - Cochrane Central Register of Controlled Trials - November 2016, EBM Reviews - Cochrane Database of Systematic Reviews - 2005 to November 2016, EBM Reviews - Health Technology Assessment – 4th Quarter 2016, EBM Reviews – NHS Economic Evaluation Database 1st Quarter 2015. Searches were also run in PubMed. Google was used to search for additional web-based materials and information. Additional articles were identified from reviewing the references of retrieved articles. Last search was conducted on 30th November 2016.

Further research/reviews required

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