Asymptomatic or smoldering multiple myeloma (SMM) represents about 15% of all patients with multiple myeloma (MM).

Current, national guidelines do not recommend early treatment of SMM though the vast majority of patients progress to active disease over time.

Multiple trials have been conducted to evaluate implications of early therapy for SMM. Most notably, Mateos et al. (N Engl J Med 2013; 369:438-447) have shown survival benefit for high risk SMM treatment with lenalidomide.

However, there is lack of consensus as to whether early treatment of SMM prior to symptomatic disease progression is superior to observation alone.

Hence we conducted a metaanalysis to determine if observation or treatment is superior in the management of SMM.

PRISMA (Preferred Reporting Items for Systematic Review and Meta-analysis) Flowchart of Included Studies

Therapeutic interventions included Thalidomide (Ref 5.9), Biphosphonates [Pamidronate (Ref 8), Zoledronic acid (Ref 6.10)] or combination of above (Ref 6.11).

Participants treated for early SMM had reduced mortality (HR=0.64, 95% CI 0.4-1.0) and better PFS (HR=0.83, 95% CI 0.64-1.07) compared to the observation group.

In subgroup analysis, patients treated with only antineoplastic agents or the combination of antineoplastic agents and biphosphonate had a better OS and PFS, whereas therapy with only biphosphonate did not impact OS or PFS (Figures 1, 2).

Thalidomide and bisphosphonates were effective in terms of progression-free survival (PFS) and overall survival (OS).

Sub-analysis examined the difference in treatment with antineoplastic agent (C), biphosphonates (B), or their combination (CB).

Data were pooled using a random effects meta analysis model using STATA (College Station Texas, V13.2).

RESULTS:

Among the 12 trials, 4 trials (Ref 1-4) were excluded due lack of survival curves for OS, PFS, TTP.

Characteristics of the 8 included trials are given in Table 1.

OVERALL SURVIVAL

PROGRESSION FREE SURVIVAL

CONCLUSIONS:

Antineoplastic treatment primarily with IMIDs or a combination of antineoplastic agents and biphosphonates was superior to observation for overall survival in SMM patients. A similar trend was seen with PFS.

This conclusion merits caution given:

- Variable definitions of SMM in patient selection for these studies.
- Non-uniform therapy used.

The findings indicate that further exploration of early therapy for SMM is warranted especially since risk benefit ratio for therapy has improved.

DISCLOSURES: None

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REFERENCES: