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BRIEF SUMMARY

[0021a] In one aspect, there is provided use of an effective amount of an anti-CD20 antibody in the manufacture of a medicament for the treatment of multiple sclerosis in a patient, wherein an effective amount of the anti-CD20 antibody is adapted to be administrable to the patient to provide an initial antibody exposure of about 0.6 grams followed by a second antibody exposure of about 0.6 grams, the second exposure not being provided until from about 6 months from the initial exposure, and each of the antibody exposures is to be provided to the patient as one or two doses of antibody, wherein the anti-CD20 antibody comprises a VH domain comprising the amino acid set forth in SEQ ID NO: 8 and a VL domain comprising the amino acid sequence set forth in SEQ ID NO: 2, and a human IgG1 constant region.

[0022] The present disclosure provides methods of treating progressive multiple sclerosis in a patient comprising administering to the patient an effective amount of an anti-CD20 antibody, wherein treatment is based upon the patient having one or more characteristics selected from the group consisting of (a) an age less than about 55 years, (b) one or more gadolinium staining lesions, (c) at least about a one point increase in Expanded Disability Status Scale (EDSS) over two years prior to starting treatment, and (d) a Multiple Sclerosis Severity Score (MSSS) greater than about 5 points.

[0022a] Also disclosed is use of a composition comprising an anti-CD20 antibody for the manufacture of a medicament for treating progressive multiple sclerosis in a patient, wherein treatment is based upon the patient having an age less than about 55 years and one or more characteristics selected from the group consisting of: (a) one or more gadolinium staining lesions and (b) an EDSS when starting treatment is between about 3.0 and about 6.5.

[0082] Also disclosed is an article of manufacture comprising: (a) a container comprising ocrelizumab; and (b) a package insert with instructions for treating multiple sclerosis in a patient, wherein the instructions indicate that an amount of ocrelizumab is to be administered to the patient that is effective to provide an initial ocrelizumab exposure of between about 0.3 to about 0.6 grams followed by a second ocrelizumab exposure of between about 0.3 to about 0.6 grams, the second exposure not being administered until from about 16 to 60 weeks from the initial exposure, and each of the ocrelizumab exposures is provided to the patient as one or two doses of ocrelizumab.

CLAIMS

1. Use of an effective amount of an anti-CD20 antibody in the manufacture of a medicament for the treatment of multiple sclerosis in a patient, wherein an effective amount of the anti-CD20 antibody is adapted to be administrable to the patient to provide an initial antibody exposure of about 0.6 grams followed by a second antibody exposure of about 0.6 grams, the second exposure not being provided until from about 6 months from the initial exposure, and each of the antibody exposures is to be provided to the patient as one or two doses of antibody, wherein the anti-CD20 antibody comprises a VH domain comprising the amino acid set forth in SEQ ID NO: 8 and a VL domain comprising the amino acid sequence set forth in SEQ ID NO: 2, and a human IgG1 constant region.

2. The use of claim 1, wherein the initial antibody exposure comprises a first dose and a second dose of anti-CD20 antibody, wherein the first dose and second dose of anti-CD20 antibody is about 0.3 grams.

3. The use of claim 2, wherein the second dose is to be administered from about 3 to 17 days from the time the first dose was administered.

4. The use of claim 2, wherein the second dose is to be administered from about 6 to 16 days from the time the first dose was administered.

5. The use of claim 2, wherein the second dose is to be administered from about 13 to 16 days from the time the first dose was administered.

6. The use of claim 2, wherein the second dose is to be administered 15 days from the time the first dose was administered.

7. The use of any one of claims 1-6, wherein the second antibody exposure comprises a single dose of anti-CD20 antibody, wherein the single dose of anti-CD20 antibody is 0.6 grams.

8. The use of any one of claims 1-7, further comprising providing a third antibody exposure.

9. The use of claim 8, wherein the third antibody exposure is to be provided about 6 months from the second antibody exposure.

10. The use of claim 8 or 9, further comprising providing a fourth antibody exposure.

11. The use of claim 10, wherein the fourth antibody exposure is to be provided about 6 months from the third exposure.

12. The use of claim 10 or 11, further comprising providing a fifth antibody exposure.

13. The use of claim 12, wherein the fifth antibody exposure is to be provided about 6 months from the fourth antibody exposure.

14. The use of claim 12 or 13, wherein subsequent antibody exposures are to be administered at intervals of approximately 6 months.

15. The use of any one of claims 1-14, wherein a second medicament is to be administered with the initial exposure or later exposures, wherein the anti-CD20 antibody is the first medicament.

16. The use of claim 15, wherein the second medicament is selected from the group consisting of an interferon, glatiramer acetate, a cytotoxic agent, a chemotherapeutic agent, mitoxantrone, methotrexate, cyclophosphamide, chlorambucil, azathioprine, gamma globulin, Campath, anti-CD4, cladribine, corticosteroid, mycophenolate mofetil (MMF), cyclosporine, a cholesterol-lowering drug of the statin class, estradiol, testosterone; a hormone replacement drug, a TNF inhibitor, a disease-modifying anti-rheumatic drug (DMARD), a non-steroidal anti-inflammatory drug (NSAID), levothyroxine, cyclosporin A, a somatastatin analogue, a cytokine or cytokine receptor antagonist, an anti-metabolite, an immunosuppressive agent, an integrin antagonist or antibody, an LFA-1 antibody, efalizumab, an alpha 4 integrin antibody, natalizumab, and another B-cell surface marker antibody.

17. The use of any one of claims 1-16, wherein the multiple sclerosis is primary progressive multiple sclerosis (PPMS).

18. The use of any one of claims 1-16, wherein the multiple sclerosis is relapsing remitting multiple sclerosis (RRMS).

19. The use of any one of claims 1-18, wherein the subject has never been previously treated with an anti-CD20 antibody.

20. The use of any one of claims 1-19, wherein the anti-CD20 antibody is to be administered intravenously.

21. The use of any one of claims 1-14 and 17-20, wherein anti-CD20 antibody is the only medicament to be administered to the subject to treat multiple sclerosis.

22. The use of any one of claims 1-21, wherein the subject has elevated anti-myelin basic protein (MBP), anti-myelin oligodendrocytic glycoprotein (MOG), anti-ganglioside and/or anti-neurofilament antibody levels.

23. The use of any one of claims 1-22, wherein elevated levels of B cells are present in cerebrospinal fluid (CSF), multiple sclerosis lesion, or serum of the subject.