

Colocación anterior y posterior: Astra Tech Implant System™ para todas las indicaciones

Numerosos estudios han demostrado unos excelentes resultados clínicos tras la colocación de implantes Astra Tech en la zona anterior del maxilar superior o la mandíbula. Se han observado pérdidas de hueso marginal mínimas, un buen resultado estético a largo plazo y unos índices de supervivencia próximos al 100%, tanto en restauraciones unitarias¹⁻⁸, en restauraciones parciales fijas⁹ y rehabilitaciones totales sobre 4-6 implantes colocados en la zona intermentoniana^{10,11}. También se han obtenido buenos resultados clínicos en situaciones de carga inmediata^{2, 5, 8, 11-13} y en implantes relacionados con procedimientos de aumento de cresta¹⁴.

Los excelentes resultados clínicos, a corto y largo plazo, obtenidos con los implantes Astra Tech colocados en zonas posteriores son menos conocidos pero extensamente probados en la literatura científica. Normalmente, la colocación de implantes en estas zonas se considera más complicada, ya que la reabsorción de la cresta junto con cavidades sinusales muy pneumatizadas en el maxilar superior o la presencia del nervio dentario inferior en la mandíbula podrían conducir a situaciones más complejas con una altura de hueso limitada. Además, el hueso de la zona posterior del maxilar superior suele poseer una menor densidad, con una cortical delgada y con estructuras trabeculares más amplias.

Independientemente de estas condiciones más complejas en las zonas posteriores, varios estudios demuestran también unos buenos resultados con los implantes Astra Tech colocados en diferentes situaciones, como restauraciones unitarias¹⁵⁻²³, prótesis parciales fijas²⁴⁻³⁸, utilizando tanto protocolos de carga convencional como temprana^{20, 35, 36}, en mandíbulas atróficas con proximidad del nervio³⁹, en pacientes periodontalmente comprometidos⁴⁰⁻⁴² y en asociación con procedimientos de elevación de seno^{28, 41-53}. Otras técnicas menos convencionales, como la colocación de dos implantes para sustituir un molar⁵⁴ y la ferulización de implantes posteriores a dientes naturales⁵⁵, también han demostrado ser opciones de tratamiento exitosas. Además, varios estudios muestran unos resultados igualmente satisfactorios con implantes colocados en ubicaciones anteriores y posteriores. Éstos comprenden diferentes indicaciones, como restauraciones unitarias⁵⁶⁻⁶¹, rehabilitaciones totales⁶²⁻⁶⁹ y parciales^{26, 58, 60, 70-77}, situaciones de aumento de cresta^{62, 78} y en pacientes periodontalmente comprometidos⁷³.

Referencias

Se pueden pedir separatas de los artículos acompañados por un ID No.
Para leer más revisiones científicas, visite: www.astratechdental.es

1. Cooper LF, Ellner S, Moriarty J, et al. Three-year evaluation of single-tooth implants restored 3 weeks after 1-stage surgery. *Int J Oral Maxillofac Implants* 2007;22(5):791-800. ID No. 78988
2. De Kok IJ, Chang SS, Moriarty JD, Cooper LF. A retrospective analysis of peri-implant tissue responses at immediate load/ provisionalized microthreaded implants. *Int J Oral Maxillofac Implants* 2006;21(3):405-12. ID No. 78727
3. Gotfredsen K. A 5-year prospective study of single-tooth replacements supported by the Astra Tech implant: a pilot study. *Clin Impl Dent Res* 2004;6(1):8-. ID No. 78273
4. Norton MR. Biologic and mechanical stability of single-tooth implants: 4- to 7-year follow-up. *Clin Impl Dent Res* 2001;3(4):214-20.
5. Norton MR. A short-term clinical evaluation of immediately restored maxillary TiOblast single-tooth implants. *Int J Oral Maxillofac Implants* 2004;19(2):274-81. ID No. 78173
6. Palmer RM, Palmer PJ, Smith BJ. A 5-year prospective study of Astra single tooth implants. *Clin Oral Implants Res* 2000;11(2):179-82. ID No. 75352
7. Gotfredsen K. A 10-year prospective study of single tooth implants placed in the anterior maxilla. *Clin Impl Dent Res* 2009;14(1):80-7.
8. Raes F, Cosyn J, Crommelinck E, Coessens P, De Bruyn H. Immediate and conventional single implant treatment in the anterior maxilla: 1-year results of a case series on hard and soft tissue response and aesthetics. *J Clin Periodontol* 2011;38(4):385-94.
9. Murphy WM, Absi EG, Gregory MC, Williams KR. A prospective 5-year study of two cast framework alloys for fixed implant-supported mandibular prostheses. *Int J Prosthodont* 2002;15(2):133-8.
10. Collaert B, De Bruyn H. Early loading of four or five Astra Tech fixtures with a fixed cross-arch restoration in the mandible. *Clin Impl Dent Rel Res* 2002;4(3):133-5. ID No. 78384
11. Cooper LF, Rahman A, Moriarty J, Chaffee N, Sacco D. Immediate mandibular rehabilitation with endosseous implants: simultaneous extraction, implant placement, and loading. *Int J Oral Maxillofac Implants* 2002;17(4):517-25. ID No. 78110
12. Colomina LE. Immediate loading of implant-fixed mandibular prostheses: a prospective 18-month follow-up clinical study—preliminary report. *Implant Dent* 2001;10(1):23-9.
13. Roe P, Kan JY, Rungecharassang K, Lozada JL. Immediate loading of unsplinted implants in the anterior mandible for overdentures: 3-year results. *Int J Oral Maxillofac Implants* 2011;26(6):1296-302.
14. Kahnberg KE, Vannas-Löfqvist L. Maxillary osteotomy with an interpositional bone graft and implants for reconstruction of the severely resorbed maxilla: a clinical report. *Int J Oral Maxillofac Implants* 2005;20(6):938-45. ID No. 78774
15. Norton MR. Multiple single-tooth implant restorations in the posterior jaws: maintenance of marginal bone levels with reference to the implant-abutment microgap. *Int J Oral Maxillofac Implants* 2006;21(5):777-84. ID No. 78773
16. Donati M, La Scala V, Billi M, et al. Immediate functional loading of implants in single tooth replacement: a prospective clinical multicenter study. *Clin Oral Implants Res* 2008;19(8):740-48. ID No. 79063
17. Lee DW, Huh JK, Park KH, et al. Comparison of interproximal soft tissue height for single implants and contra-lateral natural teeth. *Clin Oral Implants Res* 2009;20(12):1320-25.
18. Kwon HJ, Lee DW, Park KH, Kim CK, Moon IS. Influence of the tooth- and implant-side marginal bone level on the interproximal papilla dimension in a single implant with a microthread, conical seal, and platform-switched design. *J Periodontol* 2009;80(9):1541-7.
19. Kim TH, Lee DW, Kim CK, Park KH, Moon IS. Influence of early cover screw exposure on crestal bone loss around implants: intra-individual comparison of bone level at exposed and non-exposed implants. *J Periodontol* 2009;80(6):933-9.
20. Koutouzis T, Koutouzis G, Tomasi C, Lundgren T. Immediate loading of implants placed with the osteotome technique: One-year prospective case series. *J Periodontol* 2011;82(11):1556-62.
21. Accocella A, Bertola R, Sacco R. Modified insertion technique for immediate implant placement into fresh extraction socket in the first maxillary molar sites: a 3-year prospective study. *Implant Dent* 2010;19(3):220-8.
22. Hosseini M, Gotfredsen K. A feasible, aesthetic quality evaluation of implant-supported single crowns: an analysis of validity and reliability. *Clin Oral Implants Res* 2012;23(4):453-8.
23. Misch CM. Bone augmentation of the atrophic posterior mandible for dental implants using rhBMP-2 and titanium mesh: clinical technique and early results. *Int J Periodontics Restorative Dent* 2011;31(6):581-9.
24. Ceccinato D, Bengazi F, Blasi G, et al. Bone level alterations at implants placed in the posterior segments of the dentition: outcome of submerged/non-submerged healing. A 5-year multicenter, randomized, controlled clinical trial. *Clin Oral Implants Res* 2008;19(4):429-31.
25. Ceccinato D, Olsson C, Lindhe J. Submerged or non-submerged healing of endosseous implants to be used in the rehabilitation of partially dentate patients. *J Clin Periodontol* 2004;31(4):299-308. ID No. 78302
26. Lee DW, Choi YS, Park KH, Kim CS, Moon IS. Effect of microthread on the maintenance of marginal bone level: a 3-year prospective study. *Clin Oral Implants Res* 2007;18(4):465-70. ID No. 78930
27. Nordin T, Jonsson G, Nelvig P, Rasmussen L. The use of a conical fixture design for fixed partial prostheses: A preliminary report. *Clin Oral Implants Res* 1998;9(5):343-7. ID No. 75052
28. Ueda M, Yamada Y, Ozawa R, Okazaki Y. Clinical case reports of injectable tissue-engineered bone for alveolar augmentation with simultaneous implant placement. *Int J Periodontics Rest Dent* 2005;25(2):129-37.
29. Warren P, Chaffee N, Felton DA, Cooper LF. A retrospective radiographic analysis of bone loss following placement of TiO₂ grit-blasted implants in the posterior maxilla and mandible. *Int J Oral Maxillofac Implants* 2002;17(3):399-404.
30. Wennström J, Zurdo J, Karlsson S, et al. Bone level change at implant-supported fixed partial dentures with and without cantilever extension after 5 years in function. *J Clin Periodontol* 2004;31(12):1077-83. ID No. 78276
31. Van Assche N, Collaert B, Coucke W, Quirynen M. Correlation between early perforation of cover screws and marginal bone loss: a retrospective study. *J Clin Periodontol* 2008;35(1):76-9.
32. Palmer RM, Howe LC, Palmer PJ, Wilson R. A prospective clinical trial of single Astra Tech 4.0 or 5.0 diameter implants used to support two-unit cantilever bridges: results after 3 years. *Clin Oral Implants Res* 2012;23(1):35-40.
33. Kim JJ, Lee DW, Kim CK, Park KH, Moon IS. Effect of conical configuration of fixture on the maintenance of marginal bone level: preliminary results at 1 year of function. *Clin Oral Implants Res* 2010;21(4):439-44.
34. Jacobs R, Pittayapat P, van Steenberghe D, et al. A split-mouth comparative study up to 16 years of two screw-shaped titanium implant systems. *J Clin Periodontol* 2010;37(12):119-127.
35. Rismanchian M, Fazel A, Rakshan V, Ebaghian G. One-year clinical and radiographic assessment of fluoride-enhanced implants on immediate non-functional loading in posterior maxilla and mandible: a pilot prospective clinical series study. *Clin Oral Implants Res* 2011;22(12):1440-5.
36. Schliephake H, Rodiger M, Phillips K, et al. Early loading of surface modified implants in the posterior mandible - 5 year results of an open prospective non-controlled study. *J Clin Periodontol* 2012;39(2):188-95.
37. Van Assche N, Pittayapat P, Jacobs R, et al. Microbiological outcome of two screw-shaped titanium implant systems placed following a split-mouth randomised protocol, at the 12th year of follow-up after loading. *Eur J Oral Implantol* 2011;4(2):103-16.
38. Laije A, Ozkan YK, Ozkan Y, Vanlogligh B. Stability and marginal bone loss with three types of early loaded implants during the first year after loading. *Int J Oral Maxillofac Implants* 2012;27(1):162-72.
39. Pinholt EM. Surface engineered dental implant insertion in conjunction with bilateral inferior mandibular nerve transposition - a case report. *Appl Osseointegration Res* 2006;5:59-61. ID No. 78448-USX
40. Ellegaard B, Baelum V, Karring T. Implant therapy in periodontally compromised patients. *Clin Oral Implants Res* 1997;8(3):180-8. ID No. 75060
41. Ellegaard B, Baelum V, Kolsen-Petersen J. Non-grafted sinus implants in periodontally compromised patients: a time-to-event analysis. *Clin Oral Implants Res* 2006;17(2):156-64.
42. Ellegaard B, Kolsen-Petersen J, Baelum V. Implant therapy involving maxillary sinus lift in periodontally compromised patients. *Clin Oral Implants Res* 1997;8(4):305-15.
43. Becktor JP, Hallström H, Isaksson S, Senneryer L. The use of particulate bone grafts from the mandible for maxillary sinus floor augmentation before placement of surface-modified implants: results from bone grafting to delivery of the final fixed prosthesis. *J Oral Maxillofac Surg* 2008;66(4):780-6.
44. Diss A, Dohan DM, Mouhyi J, Maher P. Osteotome sinus floor elevation using Choukroun's platelet-rich fibrin as grafting material: a 1-year prospective pilot study with microthreaded implants. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2008;105(5):572-9.
45. Galindo-Moreno P, Avila G, Fernandez-Barbero JE, et al. Evaluation of sinus floor elevation using a composite bone graft mixture. *Clin Oral Implants Res* 2007;18(3):367-82.
46. Thor A, Senneryer L, Hirsch JM, Rasmussen L. Bone formation at the maxillary sinus floor following simultaneous elevation of the mucosal lining and implant installation without graft material: an evaluation of 20 patients treated with 44 Astra Tech implants. *J Oral Maxillofac Surg* 2007;65(7 Suppl 1):64-72. ID No. 78929
47. Galindo-Moreno P, Avila G, Fernandez-Barbero JE, et al. Clinical and histologic comparison of two different composite grafts for sinus augmentation: a pilot clinical trial. *Clin Oral Implants Res* 2008;19(8):755-59.
48. Kahnberg KE, Vannas-Löfqvist L. Sinus lift procedure using a 2-stage surgical technique: I. Clinical and radiographic report up to 5 years. *Int J Oral Maxillofac Implants* 2008;23(5):876-84.
49. Trombelli L, Minenna P, Franceschetti G, Minenna L, Farina R. Transcrestal sinus floor elevation with a minimally invasive technique. *J Periodontol* 2010;81(10):158-66.
50. Kahnberg KE, Wallstrom M, Rasmusson L. Local sinus lift for single-tooth implant. I. Clinical and radiographic follow-up. *Clin Impl Dent Rel Res* 2009;13(3):231-7.
51. Fermergård R, Astrand P. Osteotome sinus floor elevation without bone grafts - a 3-year retrospective study with Astra Tech implants. *Clin Impl Dent Rel Res* 2009;E-pub Nov 10, DOI:10.1111/j.1708-8208.2009.00254.x.
52. Piero B, Mario V, Niccolò N, Marco F. Implant placement in combination with sinus membrane elevation without biomaterials: A 1-year study on 15 patients. *Clin Impl Dent Rel Res* 2010;E-pub Dec 2010, DOI: 10.1111/j.1708-8208.2010.00318.x.
53. Galindo-Moreno P, Moreno-Riestra I, Avila G, et al. Effect of anorganic bovine bone to autogenous cortical bone ratio upon bone remodeling patterns following maxillary sinus augmentation. *Clin Oral Implants Res* 2011;22(8):857-64.
54. Makkonen TA, Holmberg S, Niemi L, et al. A 5-year prospective clinical study on Astra Tech dental implants supporting fixed bridges or overdentures in the edentulous mandible. *Clin Oral Implants Res* 1997;8(6):469-75. ID No. 75181
55. Palmer RM, Howe LC, Palmer PJ. A prospective 3-year study of fixed bridges linking Astra Tech ST implants to natural teeth. *Clin Oral Implants Res* 2005;16(3):302-7. ID No. 78300
56. Norton MR. The Astra Tech Single-Tooth Implant System: a report on 27 consecutively placed and restored implants. *J Periodontics Res* 1997;17(6):574-83.
57. Norton MR. Marginal bone levels at single tooth implants with a conical fixture design. The influence of surface macro- and microstructure. *Clin Oral Implants Res* 1998;9(2):91-9.
58. Steveling H, Roos J, Rasmussen L. Maxillary implants loaded at 3 months after insertion: results with Astra Tech implants after up to 5 years. *Clin Impl Dent Rel Res* 2001;3(3):120-4. ID No. 75414
59. Wennström JL, Ekstrand B, Gröndahl K, Karlsson S, Lindhe J. Implant-supported single-tooth restorations: a 5-year prospective study. *J Clin Periodontol* 2005;32(6):567-74. ID No. 78476
60. Mertens C, Steveling HG. Early and immediate loading of titanium implants with fluoride-modified surfaces: results of 5-year prospective study. *Clin Oral Implants Res* 2011;22(12):1354-60.
61. Norton MR. The influence of insertion torque on the survival of immediately placed and restored single-tooth implants. *Int J Oral Maxillofac Implants* 2011;26(6):1333-43.
62. Thor A, Wanfors K, Sennerby L, Rasmussen L. Reconstruction of the severely resorbed maxilla with autogenous bone, platelet-rich plasma, and implants: 1-year results of a controlled prospective 5-year study. *Clin Impl Dent Rel Res* 2005;7(4):209-20. ID No. 79032
63. Weibrich G, Buch RS, Wegener J, Wagner W. Five-year prospective follow-up of the Astra Tech standard dental implant in clinical treatment. *Int J Oral Maxillofac Implants* 2001;16(4):557-62.
64. Toljanic JA, Baer RA, Ekstrand K, Thor A. Implant rehabilitation of the atrophic edentulous maxilla including immediate fixed provisional restoration without the use of bone grafting: a review of 1-year outcome data from a long-term prospective clinical trial. *Int J Oral Maxillofac Implants* 2009;24(3):518-26.
65. Mertens C, Steveling HG, Stucke K, Pretz B, Meyer-Baumer A. Fixed implant-retained rehabilitation of the edentulous maxilla: 11-year results of a prospective study. *Clin Implant Dent Rel Res* 2012;E-pub Jan 17 2012. doi 10.1111/j.1708-8208.2011.00443.x.
66. Barbier L, Abeloos J, De Clercq C, Jacobs R. Peri-implant bone changes following tooth extraction, immediate placement and loading of implants in the edentulous maxilla. *Clin Oral Investig* 2011;E-pub Sept 20 2011 doi:10.1007/s00784-011-0617-9.
67. Erkapers M, Ekstrand K, Baer RA, Toljanic JA, Thor A. Patient satisfaction following dental implant treatment with immediate loading in the edentulous atrophic maxilla. *Int J Oral Maxillofac Implants* 2011;26(2):556-64.
68. Mertens C, Steveling HG, Seeger B, Hoffmann J, Freier K. Reconstruction of severely atrophied alveolar ridges with calvarial onlay bone grafts and dental implants. *Clin Impl Dent Rel Res* 2011;E-pub Oct 20 2011. doi 10.1111/j.1708-8208.2011.00390.x.
69. Pieri F, Aldini NN, Fini M, Marchetti C, Corinaldesi G. Immediate fixed implant rehabilitation of the atrophic edentulous maxilla after bilateral sinus floor augmentation: a 12-month pilot study. *Clin Impl Dent Rel Res* 2011;E-pub Jul 11 2011. doi: 10.1111/j.1708-8208.2011.00360.x.
70. Gottfredsson K, Karlsson U. A prospective 5-year study of fixed partial prostheses supported by implants with machined and TiO₂-blasted surface. *J Prosthodont* 2001;10(1):2-7.
71. van Steenberghe D, De Mars G, Quirynen M, Jacobs R, Naert I. A prospective split-mouth comparative study of two screw-shaped self-tapping pure titanium implant systems. *Clin Oral Implants Res* 2000;11(3):203-9.
72. Wennström JL, Ekstrand B, Gröndahl K, Karlsson S, Lindhe J. Oral rehabilitation with implant-supported fixed partial dentures in periodontitis-susceptible subjects: A 5-year prospective study. *J Clin Periodontol* 2004;31(9):713-24. ID No. 78275
73. Yi SW, Ericsson I, Kim CK, Carlson GE, Nilner K. Implant-supported fixed prostheses for the rehabilitation of periodontally compromised dentitions: a 3-year prospective clinical study. *Clin Impl Dent Rel Res* 2001;3(3):125-34. ID No. 75415
74. Chang YM, Wennström JL. Bone alterations at implant-supported FDPs in relation to inter-tooth distances: a 5-year radiographic study. *Clin Oral Implants Res* 2010;21(7):735-40.
75. Balleri P, Ferrari M, Veltri M. One-year outcome of implants strategically placed in the retrocanine bone triangle. *Clin Impl Dent Rel Res* 2010;12(4):324-30.
76. Stanford CM, Wagner W, Rodriguez YBR, et al. Evaluation of the effectiveness of dental implant therapy in a practice-based network (FOCUS). *Int J Oral Maxillofac Implants* 2010;25(2):367-73.
77. Kim JS, Sohn JY, Park JC, et al. Cumulative survival rate of Astra Tech implants: a retrospective analysis. *J Periodontal Implant Sci* 2011;41(2):86-91.
78. Koutouzis T, Lundgren T. Crestal bone-level changes around implants placed in post-extraction sockets augmented with demineralized freeze-dried bone allograft: a retrospective radiographic study. *J Periodontal Implant Sci* 2010;81(10):1441-8.

