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Dynamic Gait and Pressure Analysis Report

To: The Foot Clinic
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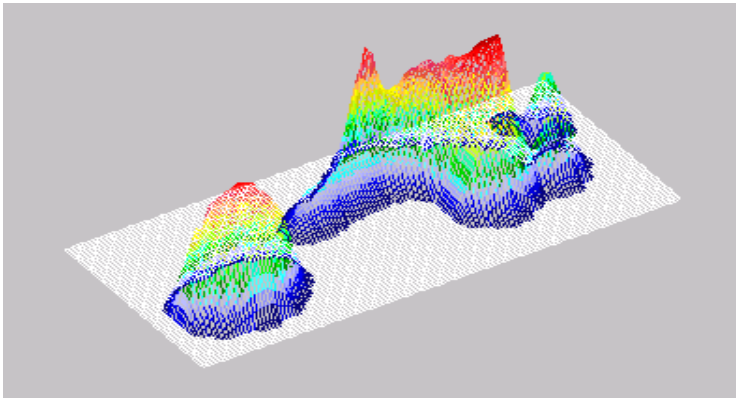
Patient Name: Jane Smith
Analysis Date: Dec 05, 2005
Practitioner: Dr. Bob Jones

CSG Reviewer: Dr. Hong Liu MD

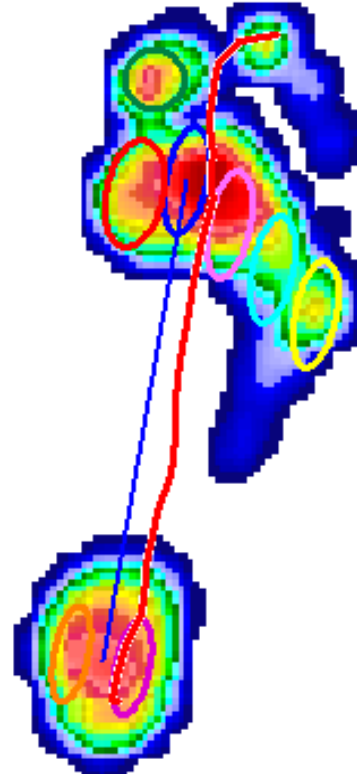
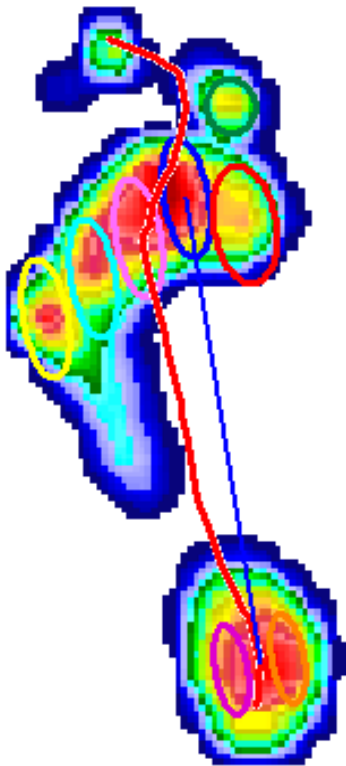
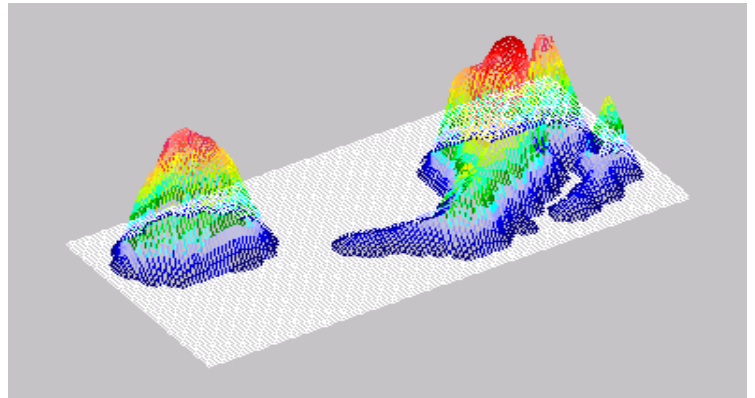
Client No: 00103899
Order Ref. No: CLSA000049G001

Medical Advisor: Dr. Allen Zimberg DPM

Left Step #2



Right Step #2



Left Foot, Step # 2	%	Normal	Analysis
Contact Subphase Duration	07	17 - 24	a severely reduced contact subphase duration
Midstance Subphase Duration	60	27 - 48	a moderately prolonged midstance subphase duration
Propulsive Subphase Duration	33	35 - 49	a mildly reduced propulsive subphase duration
Lateral Heel Peak Time	31	16 - 24	a severely late lateral heel peak time
Medial Heel Peak Time	31	20 - 24	a moderately late medial heel peak time
Heel Peak Time Difference	00	03 - 80	a mildly low heel peak time difference
Lateral Heel Peak Pressure	93	72 - 78	a severely high lateral heel peak pressure
Medial Heel Peak Pressure	102	37 - 43	a severely high medial heel peak pressure
Medial Heel Pressure Duration	65	49 - 65	a normal medial heel pressure duration
Met 5 Peak Time	69	66 - 71	a normal fifth metatarsal peak time
Met 4 Peak Time	70	68 - 73	a normal fourth metatarsal peak time
Met 3 Peak Time	73	71 - 74	a normal third metatarsal peak time
Met 2 Peak Time	77	73 - 80	a normal second metatarsal peak time
Met 1 Peak Time	73	73 - 81	a normal first metatarsal peak time
Hallux Peak Time	79	82 - 88	a mildly early hallux peak time
Maximum Forefoot Load Time	85	73 - 80	a moderately late maximum forefoot loading
Met 1 Pressure Duration	72	54 - 79	a normal first metatarsal pressure duration
Met 1 Peak Pressure	61	45 - 55	a moderately high first metatarsal peak pressure
Hallux Peak Pressure	64	27 - 33	a severely high hallux peak pressure

Statements

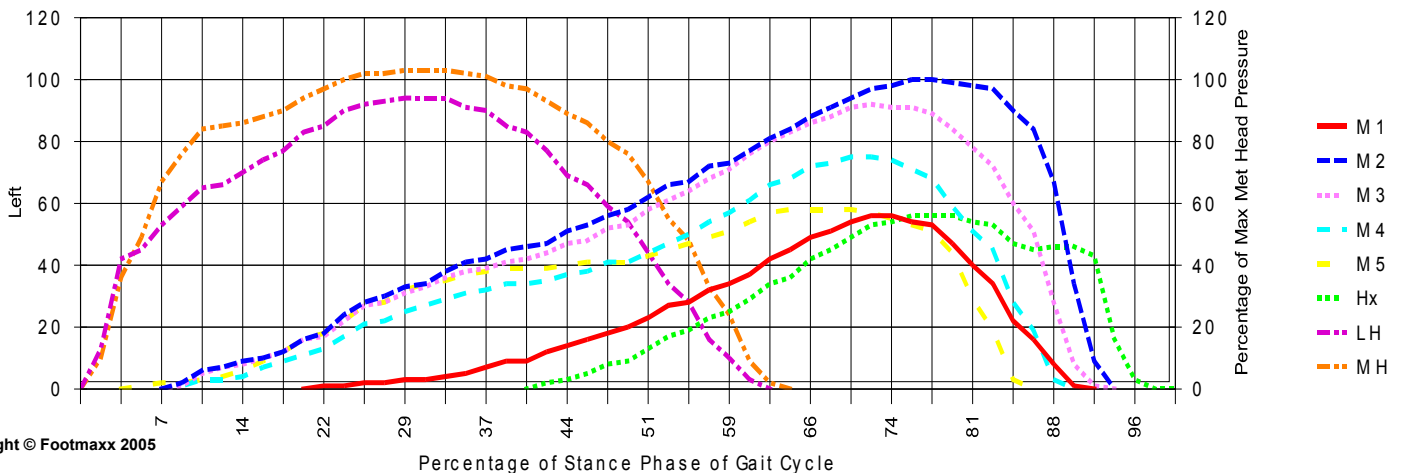
1. Midtarsal joint locking is abnormally delayed as suggested by a late maximum forefoot loading time.
2. A functionally rigid plantarflexed first ray is suggested by the first metatarsal peaking high at a sufficiently early time through its duration of contact.
3. Increased shock at heel strike is proposed by high peak pressure in the heel and a low difference in peak times between the medial and lateral heel points.
4. A tight posterior group, a weak anterior group, or a plantarflexed first ray is suggested by a severely reduced contact subphase duration.
5. Acceptable forefoot weight transfer is demonstrated by pressure peaking in the sequence of M5, M1, M2, Hx or M5, M2, M1, Hx.

Summary

This foot demonstrates a strong dynamic presence of the first ray as evidenced by a high peak pressure which in some cases occurs earlier than normal. This characteristic indicates a functionally plantarflexed first ray that is often associated with rigid foot function. Poor shock absorption and increased heel impact often accompany a plantarflexed first ray.

Conclusion

This patient requires orthotics to accommodate for and correct a demonstrated degree of functional rigidity. Orthotic therapy will promote proper timing ofmidtarsal joint locking and will normalize the cycle of supination and pronation through the stance phase. The foot will become more adaptable to the pressures inherent in normal gait.



Right Foot, Step # 2	%	Normal	Analysis
Contact Subphase Duration	09	17 - 24	a severely reduced contact subphase duration
Midstance Subphase Duration	55	27 - 48	a moderately prolonged midstance subphase duration
Propulsive Subphase Duration	36	35 - 49	a normal propulsive subphase duration
Lateral Heel Peak Time	27	16 - 24	a mildly late lateral heel peak time
Medial Heel Peak Time	28	20 - 24	a moderately late medial heel peak time
Heel Peak Time Difference	01	03 - 80	a mildly low heel peak time difference
Lateral Heel Peak Pressure	81	72 - 78	a mildly high lateral heel peak pressure
Medial Heel Peak Pressure	77	37 - 43	a severely high medial heel peak pressure
Medial Heel Pressure Duration	60	49 - 65	a normal medial heel pressure duration
Met 5 Peak Time	50	66 - 71	a severely early fifth metatarsal peak time
Met 4 Peak Time	70	68 - 73	a normal fourth metatarsal peak time
Met 3 Peak Time	72	71 - 74	a normal third metatarsal peak time
Met 2 Peak Time	75	73 - 80	a normal second metatarsal peak time
Met 1 Peak Time	72	73 - 81	a mildly early first metatarsal peak time
Hallux Peak Time	77	82 - 88	a moderately early hallux peak time
Maximum Forefoot Load Time	81	73 - 80	a mildly late maximum forefoot loading
Met 1 Pressure Duration	81	54 - 79	a mildly prolonged first metatarsal pressure duration
Met 1 Peak Pressure	76	45 - 55	a severely high first metatarsal peak pressure
Hallux Peak Pressure	72	27 - 33	a severely high hallux peak pressure

Statements

1. Midtarsal joint locking is abnormally delayed as suggested by a late maximum forefoot loading time.
2. A functionally rigid plantarflexed first ray is suggested by the first metatarsal peaking early and at a high pressure.
3. Increased shock at heel strike is proposed by high peak pressure in the heel and a low difference in peak times between the medial and lateral heel points.
4. A tight posterior group, a weak anterior group, or a plantarflexed first ray is suggested by a severely reduced contact subphase duration.
5. Acceptable forefoot weight transfer is demonstrated by pressure peaking in the sequence of M5, M1, M2, Hx or M5, M2, M1, Hx.

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This foot demonstrates a strong dynamic presence of the first ray as evidenced by a high peak pressure which in some cases occurs earlier than normal. This characteristic indicates a functionally plantarflexed first ray that is often associated with rigid foot function. Poor shock absorption and increased heel impact often accompany a plantarflexed first ray.

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This patient requires orthotics to accommodate for and correct a demonstrated degree of functional rigidity. Orthotic therapy will promote proper timing ofmidtarsal joint locking and will normalize the cycle of supination and pronation through the stance phase. The foot will become more adaptable to the pressures inherent in normal gait.

